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Abstracts of Articles

MORPHOLOGY

571. BLECHA, J., CABICAR, I., VÝMOLA, F., & MORÁVEK, F. *Některé vlastnosti kožního povrchu novorozence.* (Some properties of the newborn's skin surface.) *Česk. Pediat.*, 1958, **8**, 881-885. The newborn's skin has some special morphological signs and characteristics. The hormones increase sebaceous secretion, the sebaceous glands are at some spots enlarged, the sloughing of epidermal cells especially in follicular ducts is increased. An important feature of newborn's skin is the comedone. This is a clinical manifestation of a common enlarged duct of two or three follicular ducts. The covering of the comedones and partially even their content consist of epithelial cells glued together by sebaceous secretion. The intact comedone with no inflammatory margin (especially on the nose) is usually sterile. —English Summary.

572. DOKLADAL, MILAN. (Masaryk Univer., Brno, Czechoslovakia) **Growth of the main head dimensions from birth up to twenty years of age in Czechs.** *Hum. Biol.*, 1959, **31**, 90-109. Cross-sectional measurements of head circumference, length and breadth were obtained on 2763 and 2879 boys of Czech nationality residing in Brno. Means, standard deviations, coefficients of variation, increments, and percentage of mature size are reported from birth through 2 years at six-month intervals and from two through 20 years at yearly intervals. The age given actually represents the mid-point of the range included in the interval. Sex differences are noted for all measures at all ages, with males having the greater size and variability. A moderate pubertal spurt occurs in both sexes. Because of the earlier spurt in girls, the sex difference in means is reduced during early adolescence. Over 50% of the increase in head circumference is achieved during the first year; there is little increase after 15 years. The growth curve for length is steepest during the first three years and quite flattened thereafter. At birth the female head is relatively nearer to its adult length than is the male; the postnatal growth is more accelerated. Postnatal increments in breadth are somewhat less than those for length, about half of the increase occurring during the first 6 months. No sex difference is observed in breadth relative to length. The means obtained for this sample are compared with those for other national groups and with earlier data on Czech nationals. The results here confirm those of earlier studies indicating a moderate length and wide breadth relative to samples of other nationalities. Compared to values derived from Czechoslovakian samples 30 to 60 years ago, the heads of the present sample are larger during the first six years of life. —D. H. Eichorn.

573. GARN, STANLEY M. (Fels Research Inst., Yellow Springs, Ohio) **Fat, body size and growth in the newborn.** *Hum. Biol.*, 1958, **30**, 265-280. (1) The thickness of the fat-plus-skin shadow at the level of the 11th rib was measured on antero-posterior "birth" x-rays of 146 Ohio-born white infants, and investigated in relation to maternal size, gestation length, body size and long-bone length. (2) As with other fat sites analyzed to date, the distribution of LT fat was markedly skewed. While there was no sex difference in the thickness of fat, the fat-weight ratio for female neonates was significantly higher than in the male. (3) Unlike birth size and birth weight which were positively and significantly correlated with maternal size, the rate of maternal weight gain, etc., fat thickness at birth was not significantly related to maternal size, weight gain or the length of gestation. (4) Fat thickness was moderately related to birth weight in both sexes ($r = 0.6$ to 0.7), and length, femoral and tibial length and spine length (T_1-L_5) to a lesser degree ($r = 0.2$ to 0.4). Fatter babies were longer overall, and in consequence of increased fatness and greater length tended to weigh more. (5) Those neonates who were fatter at birth, tended to be

fatter and longer during the first few months of postnatal life, but gained less weight during extrauterine existence. (6) Analysis of fat-weight data on a series of nine diabetic progeny revealed that the diabetic infants were extremely fat, exceptionally so in relation to their weight, despite the fact that they had been delivered well before term. (7) These findings indicated that subcutaneous fat could be investigated roentgenogrammetrically at the earliest age levels, and with anticipation of useful findings on the fat "compartment" and its implications in terms of late prenatal development. (8) Attention was drawn to available sugar as one possible determinant of birth fat, and to variations in fetal activity as a second variable possibly affecting fat storage in the late prenatal period. —Author's Summary.

574. GOLDSMAN, S. The variations in skeletal and denture pattern of excellent adult facial types. Angle Orthodont., 1959, 29, 63-92. In a study of 50 untreated and "excellent Caucasian faces" chosen by a panel of artists for "the harmony of facial balance and proportion" (19 males, 31 females), lateral X-ray films were analyzed statistically via dimensions, angles, indices. From mean values for the group polygons were constructed after the Down's Analysis method. No real sex differences were found, although males had slightly more concave faces. The present sample differed from Down's mean values in several dimensions (Y-axis) and angles (facial). The Tweed concept of "mandibular incisor positioning as index of facial esthetics" was not substantiated. It is concluded that "a compensatory mechanism or balancing property functions within the dento-facial complex" to give an over-all harmony, even though "tremendous variation is demonstrated here." —W. M. Krogman.

575. GRAY, S. W., & LAMONS, F. P. Skeletal development and tooth eruption in Atlanta children. Amer. J. Orthodont., 1959, 45, 272-277. Based on 147 records of chronological age, dental age (Schour and Massler), and skeletal age (Greulich and Pyle) of 25 white boys, 36 white girls, 4 to 15 years of age, seen from 1 to 6 times on annual basis. The boys and girls are in close agreement in skeletal age; at 5 years both are about six months behind the G. and P. standards, but by 15 years both have caught up. In tooth development boys agree well with S. and M. at 5 years, but at 10 years they are six months behind, and at 15 years they are a year behind. The girls, throughout, are only about two months behind the S. and M. standards. The authors feel that dental age standards should be available for each sex, not on a pooled-sex basis. —W. M. Krogman.

576. JAMES, F. E. (Cotshill Hosp., Chipping Norton, Oxon.) Hypertelorism associated with poor frontal development of skull and bilateral Sprengel's shoulders. Brit. med. J., 1959, 1, 1019-1029. A case report of a mentally defective child with a number of associated congenital abnormalities is presented. —W. W. Sutow.

577. MARESH, MARION M. (Univer. of Colorado Sch. Medicine, Denver) Linear body proportions. A roentgenographic study. Amer. J. Dis. Child., 1959, 98, 27-49. As a part of the study of the physical growth of the subjects in the Child Research Council study series, the linear proportions of the body segments have been investigated. The bone lengths of the humerus, radius, femur, and tibia on roentgenograms of the left extremities have been considered as equivalents of the lengths of the upper and lower arm and the upper and lower leg. These lengths, when expressed as per cent of height, have been termed "relative lengths" in this discussion. Similarly the measurements of crown-rump length and sitting height have been converted into "relative crown-rump length" and "relative sitting height" by dividing the measurement by body length or height. Standards of reference for percentile levels for the relative lengths from infancy to young adult life have been derived from the seriatim measurements of over 200 persons. Since the rate of growth in length of the major long bones of the extremities is greater than the rate of growth in height, it is obvious that the values for relative lengths of these bones will be progressively larger values during childhood and adolescence. At the same time, sitting height will be a progressively smaller per cent of height during these years. Thus the changing relative lengths of the segments of the extremities are best described in relation to the percentile levels at each successive age. Only a few persons will have relative lengths that remain

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at the same percentile level throughout their growing years. In general the infancy period and the adolescent years are the times when shifts to higher or lower percentile levels occur. These changes in proportions to relatively longer or shorter segments are rarely of extreme magnitude, i.e., the very short-legged infant may become an adolescent with relative leg lengths near the median for the group but he is not likely to become a relatively long-legged adolescent or young adult. During the childhood years, from about four years of age till the onset of adolescence, percentile positions are usually quite stable and only minor deviations in percentile positions are observed. The linear proportions of 94 young adults show not only a great deal of variation between individuals but a wide range of variation in the comparative relative lengths of the long bones of the extremities and of relative sitting height in the same person. The computed standardized scores were used to set up five zones of distribution—average, moderately long, moderately short, long, and short. Using these criteria, only 2 of the 94 persons had "average" relative bone lengths. It was common for the relative bone lengths in an individual to be spread over three of the five zones but uncommon for the proportions of one person to include both a very long and a very short relative bone length. Within this group of 94 young adults some classification of segmental proportions that were "alike" was possible. In frequency these were as follows: (1) Alike proximal segments (humerus and femur) and/or alike distal segments (radius and tibia)—32%; (2) Alike segments of the arm (humerus and radius) and/or alike segments of the leg (femur and tibia)—25%; (3) Three of the four segments alike—22%; (4) All four segments alike—6%; (5) Unclassified—15%. The reciprocal relationship between relative leg bone lengths and relative sitting height was plainly evident in these data. It was also evident that individuals of the same height often varied greatly in their segmental proportions and that there was no correlation between the relative lengths of any of the long bones and total height. Included in this group of 94 young adults are 20 pairs of siblings. The correlation coefficients between the younger and the older members of each family for the standardized scores of the relative bone lengths and for relative sitting height range from +0.33 to +0.73. In contrast, the values for r in the 47 randomly selected pairs ranged from -0.06 to +0.13. The computed percentile levels for the relative lengths for the siblings pairs are presented. The assumption that the segmental proportions in siblings will be alike more often than in nonsiblings would appear to be warranted. —Author's Summary.

578. PAUL, SHEILA SINGH (Kalavati Saran Children Hosp.), & **AHLUWALIA, D.** **Report of anthropometric measurements of healthy new born in Delhi.** *Indian J. Child Hlth*, 1957, 6, 863-867. The weight of healthy babies of North Indian parentage varied from 5 lbs. to 9 lbs. 5½ oz. The weight of the babies showed a significant increase with the rise in the income level of the father. No actual difference was noted in the weight of babies from vegetarian and nonvegetarian families. Young mothers had lighter babies than older ones up to 35 years. Babies from the 1st rank were smaller than those from the higher ranks up to 4th rank. Males weighed more than female babies. With varying average birth weights of all babies significant differences were noted in several anthropometric measurements. —Authors' Summary.

579. PHADKE, M. V. (Sassoon Hosp., Poona) **Anthropometric observations of infants and children.** *Indian J. Child Hlth*, 1957, 6, 868-876. The study presents a statistical analysis of anthropometric observations on 1335 children belonging to the lowest income bracket in the Poona area; the sample was drawn from children attending municipal welfare centres and free Municipal schools. The results have been presented in a tabular form. The salient features are: there are no differences in the heights as between boys and girls. The thigh measurements of girls are consistently higher than those of boys. In other respects the values are higher in boys. In most measurements it was found that there was a sudden acceleration in the growth rate between 4 years and 6 years. —Author's Summary.

580. YOUNG, RICHARD W. (Fels Res. Inst., Yellow Springs, Ohio) **Age changes in the thickness of the scalp in white males.** *Hum. Biol.*, 1959, 31, 74-79. (1) Scalp thickness was measured at 20 points between nasion and lambda on serial

lateral skull x-rays of 20 boys who had participated in the Fels Research Institute study from one month to 16 years of age. Similar measurements were made on x-rays of 100 adults. (2) Scalp thickness increases from one to 9 months, is constant or decreases from 9 months to 3 or 4 years (or later in certain regions), then increases until adulthood. (3) Up to age 8 the scalp is thickest at glabella; thereafter it is thickest just in front of lambda. (4) Before 4 years the thinnest part of the scalp is in the area of bregma. After that age the thinnest part is on the upper forehead. (5) These findings are consistent with the results of studies which have described changes in the distribution of soft tissues in other regions of the body at various intervals during the life span. (6) Although male scalps are thicker, there is no apparent sex difference in the pattern of mid-sagittal scalp thickness in adults. —Author's Summary.

581. Report of the survey on heights and weights of school children in Bombay suburbs undertaken by the Gujarat Research Society and comparison of the results with municipal data. Indian J. Child Hlth, 1957, 6, 885-918.

PHYSIOLOGY AND BIOCHEMISTRY

582. ADAMS, FORREST H., HIRVONEN, LEO, LIND, JOHN, & PELTONEN, TUOMAS. (Univ. of Calif., Los Angeles) **Physiologic studies on the cardiovascular status of newborn pigs.** *Etudes Neo-Natales*, 1958, 7, 53-61. The cardiovascular response to acetylcholine, adrenaline, noradrenaline, and serotonin was studied in 11 newborn pigs, ranging in age from 1 to 43 hours. Acetylcholine in doses as small as 0.1 μ g. produced a significant drop in right ventricular and systemic pressure with no essential effect on the pulse rate. Temporary respiratory depression or arrest were common with larger doses of acetylcholine. Small amounts of adrenaline regularly produced an increase in pressure with little effect on the heart rate except in large doses which resulted in numerous extrasystoles. Noradrenaline, in amounts as small as 0.5 μ g., produced an increase in pressure similar to adrenaline, but no effect was observed on the pulse rate. Serotonin regularly produced a decrease in pressure but not of the same magnitude as acetylcholine. The effect of serotonin on the pulse rate was insignificant except in large doses when it produced heart block. These studies indicate that differences exist in the cardiovascular response to certain drugs between newborn animals of different species and the newborn infant. —Authors' Summary.

583. ADAMS, FORREST H., LIND, JOHN, & RAURAMO, LAURI. (Univ. of Calif., Los Angeles) **Physiologic studies of the cardiovascular status of normal newborn infants. Effect of adrenaline, noradrenaline, 10% oxygen and 100% oxygen.** *Etudes Neo-Natales*, 1958, 7, 62-70. The cardiovascular response to acetylcholine, adrenaline, noradrenaline, 100% oxygen and 10% oxygen, was studied in 8 normal newborn infants from 1 to 34 hours of age. Acetylcholine produced no significant decrease in the right ventricular or pulmonary artery pressure, and no bradycardia. Adrenaline and noradrenaline both produced a significant increase in the pressure. Adrenaline caused a tachycardia with extrasystoles; whereas noradrenaline frequently produced an early bradycardia of short duration. Administration of 100% oxygen or 10% oxygen by a hood produced no consistent (sic) changes in the right ventricular or pulmonary artery pressure. 100% oxygen caused a slowing of the heart rate, whereas 10% oxygen caused an increase in heart rate. —Authors' Summary.

584. BARNES, GEORGE R. (Coll. Medicine, Univ. of Iowa, Iowa City) **Acceptance of a soya food by infants.** *Amer. J. Dis. Child.*, 1959, 98, 1-5. The clinical evaluation of a new protein food for infants has been discussed with respect to its reception by infants and the incidence of reactions to it. Virtually no reactions occurred. It was readily accepted (83% of 191 infants). Infants did not appear to tire of it, generally continuing to accept it as long as they remained receptive to other baby foods. —Author's Summary.

585. BLAŽEK, FRANTIŠEK. Tělesný povrch jako měrná jednotka v pediatrii. (Surface area as a unit of measurement in paediatrics.) *Cesk. Pediat.*, 1958, **8**, 877-881. A comparison of standards for predicting energy metabolism from surface area and from regression equations has been carried out. Area was calculated according to the Du Bois formula and controlled by tables and surface area nomograms. This data was taken from 112 boys and 123 girls from 3 to 14 years of age. Prediction of basal calory needs from surface area did not show a greater degree of precision, the scatter of normal values has remained the same. —English Summary.

586. ČÍŽKOVÁ-PÍŠAROVICOVÁ, J., JANDA, F., KAPALÍN, A., LÁT, J., TEJRALOVÁ, J., VAMBEROVÁ, M., & VANEČKOVÁ, M. Růst u obesných dětí. (The growth of obese children.) *Cesk. Pediat.*, 1958, **8**, 885-892. . . . 4046 children have been observed between 6 and 14 years of age, and in 2139 children finally followed up the incidence of obesity in individual height groups was determined, which shows the relationship between excess bodily growth and obesity. . . . 234 obese children were selected from the out-patient clinic in Prague 12. Growth in height in males was advanced in 70%, in 5% gigantic. In females it was advanced in 66%, and in 3% exceptional. It was considered whether accelerated growth was an advantage, in relation to the nonharmonic growth of various organ systems. The only means of therapy is dietary restriction, as has been confirmed in children's summer camps in 1956-1957. Diet can also affect growth in height and other factors. —From English Summary.

587. DÉMANT, F., NEUBAUER, E., SRŠEN, Š., & TISCHLER, V. Antidiuretický hormon v krvi zdravého novorozence za fyziologické dehydratácie. (Antidiuretic hormone blood levels in normal newborns under conditions of physiological dehydration.) *Cesk. Pediat.*, 1958, **8**, 918-921. Previous work is cited and the level of ADH has been determined in cord blood of the healthy newborn, and in venous blood, during the first days of life under conditions of dehydration. The Jefferson method of bioassay on rats, modified by Holeček et al., was used. ADH could not be demonstrated under these conditions. It is concluded that extrarenal, particularly hormonal, mechanisms are not developed at this age. —English Summary.

588. DREIZEN, SAMUEL, SNODGRASSE, RICHARD M., WEBB-PEPLOE, HAMILTON, & SPIES, TOM D. (Dept. Nutrition & Metabolism, Northwestern Univer.) The retarding effect of protracted undernutrition on the appearance of the postnatal ossification centers in the hand and wrist. *Hum. Biol.*, 1958, **30**, 253-264. A sample of 301 boys and 240 girls with clinical diagnoses of undernutrition were selected from among the white, native-born children comprising the growth study group of the Nutrition Clinic at Hillman Hospital, Birmingham, Alabama. Roentgenograms of the left hand and wrist, taken at intervals of 3 months through the fifth birthday, and every 6 months thereafter, were available. The number of films per child varied with age at entering the study. The time of appearance of 31 centers was determined, using as age standards the 1950 Greulich-Pyle Atlas. The investigators summarized their findings as follows: "(1) The mean time of appearance for each of the 31 ossification centers was delayed in every instance in each sex. The mean amount of delay in the boys exceeded that of the girls for all but three centers. (2) The frequency of retardation in onset of ossification surpassed the combined frequency of centers appearing either early or on schedule to a statistically significant degree for 29 and 26 of the 31 centers in the boys and girls respectively. (3) Some or all of the assessable centers were delayed in 504 (91.3%) of the 541 children. (4) Delay in advent of ossification was much more pronounced in the carpals than in the metacarpal and phalangeal epiphyses. In both sexes the delay in the epiphysis of the distal ulna greatly exceeded that of the distal epiphysis of the radius. (5) Quantitatively, in boys the average delay ranged from 1.2 months for the adductor sesamoid of the thumb to 28.9 months for the greater multangular; and in girls, from 1.8 months for the proximal phalanx of the third digit to 18.3 months for the greater multangular." —D. H. Eichorn.

589. DREYFUS-BRISAC, C., SAMSON, D., BLANC, C., & MONOD, N. (Hôpital de la Pitié, Paris) *L'electroencephalogramme de l'enfant normal de moins de 3 ans. Etudes Neo-Natales*, 1958, 7, 143-175. The authors are engaged in a continuing study of the electroencephalograms of premature and normal neonates and infants. They have obtained records on nonviable premature infants as early as the 5th month after conception, and have longitudinal records on viable premature infants born at 6 or 7 fetal months. This paper presents and describes sample records covering the age range from the 5th fetal month through the 2nd postnatal year. Maturational stages from the 5th fetal month through the 1st postnatal year are summarized. Before the 8th fetal month electroencephalographic activity is composed of bursts, with no clear differentiation between sleeping and waking and no clear reactivity. Asynchrony of the two hemispheres decreases from the 5th to the 8th fetal month. Patterns of frequency and topography differ at 5, 6, and 7 fetal months, with a rapid evolution. After the 8th fetal month the record becomes continuous and has no clear topographical organization. At this time reactivity during sleep and differentiation between sleep and waking records appear. The occipital rhythm and reactivity while awake appear to 3 postnatal months and become more evident thereafter. The authors feel that the stages of 5 and 8 fetal months and 3 postnatal months are particularly significant from a neurological and bioelectrical point of view. —D. H. Eichorn.

590. DU PAN, R. MARTIN, SCHEIDEGGER, J.-J., WENTER, P., KOECHLI, B., ROUX, J., & RABINOWITZ, J. (Clinique des Nourrissons) *Le passage trans-placentaire de la gamma-globuline chez la femme. Etudes Neo-Natales*, 1958, 7, 71-78. Human gamma globulins labelled with I^{131} by a modification of the Pressman method were injected into 12 women 2 to 48 hours prior to delivery. The percentage of the labelled gamma globulins found at delivery in the maternal serum, cord blood and placental tissue is given for five cases. It is concluded that: (1) gamma globulins pass the placenta rapidly, since 3 hours postinjection they are found not only in placental tissue, but also in the cord blood; (2) there is no tendency for gamma globulins to accumulate in the placenta, since 48 hours postinjection the concentration in the cord blood is markedly greater than in the placental tissue; and (3) an equilibrium between fetal and maternal levels is not reached quickly, since 48 hours postinjection the maternal levels is not reached quickly, since 48 hours postinjection the maternal levels are more than 5 times greater than the fetal. It is also noted that gamma globulins injected into the systemic circulation disappear rapidly, presumably because of passage into the extravascular fluid. —D. H. Eichorn.

591. EKLUND, JARL. (Univer. of Helsinki) *Gamma globulin in maternal and cord blood.* *Ann. paediat. Fenniae*, 1958, 4, 99-104. The present communication is a paper-electrophoretic study of the relationship between the gamma globulin in the cord blood as compared with the maternal blood. The method is described in detail. The mean value for the gamma globulin level in the cord blood is somewhat higher than in the maternal blood. This relationship is not, however, constant for the individual pairs, 7 of 25 pairs showing the opposite relationship. The correlation observed is hardly statistically significant. There was no difference between the cord blood from the artery and the vein. The findings are in good agreement with the results of previous investigations in which other methods were used. —Author's Summary.

592. FLAŠAROVÁ, B. (Porodnicko-gynekologická klinika, Olomouchi) *Chutové čítí u novorozenců.* (The sense of taste in newborns.) *Cesk. Pediat.*, 1959, 14, 526-529. Threshold dosages of 4 basic tastes (salty, sweet, acid and bitter) are far higher in newborns than in adults. In the first days of life there is no reliable taste orientation of the newborn. From the 2nd day, more and more newborns react uniformly to raised concentrations of the "taste" solutions. —English Summary.

593. FOMON, SAMUEL J., & MAY, CHARLES D. (Coll. Medicine, Univer. of Iowa, Iowa City) *The adequacy of soya bean protein in promoting nitrogen retention in infancy.* *Amer. J. Dis. Child.*, 1959, 98, 6-10. Four normal infants, 4 to

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8½ months of age, were studied while receiving pasteurized human milk with or without additional solid foods of low protein content. In some of the studies an experimental soya bean food was substituted for other protein in sufficient amount to supply 41% to 45% of the total intake of nitrogen. An attempt was made to maintain constant the intake of calories, protein, carbohydrate, and fat throughout all the studies with a given infant. The study failed to demonstrate superiority of feeding regimens that provided all, or nearly all, of the protein in the form of human milk over the regimen that provided 41% to 45% from the soya bean food. —Authors' Summary and Conclusion.

594. JANOS, O. Vyšší nervová činnost nedonošených dětí v prvních měsících života. (The higher nervous activity in premature infants during the first six months of life.) *Cesk. Pediat.*, 1958, 8, 951-955. Various processes of the higher nervous activity in infants during the first half year have been elaborated. The results of premature infants (8 infants) and of two groups of full term infants, one of which (16 infants) was of the same postnatal age and other (7 infants) of the same post-conceptual age with the premature infants, are compared. Some retardation was found in premature infants, but only with regard to their chronological age, and not also to their postconceptual age. The view is supported, that the development of the higher nervous activity in the premature children during the earliest postnatal period is not accelerated in consequence of the premature initiation of extrauterine life. —English Summary.

595. KAUSTE, OLLI (Univer. of Helsinki) **Intravenous fat emulsions.** *Ann. paediat. Fenniae*, 1958, 4, Suppl. 10, 78 p. A 20% olive oil emulsion was administered to 35 normal children, to 16 premature infants, and to 101 children suffering from various diseases, mainly disorders of metabolism. The emulsion was given as a single rapid injection, and the dose was 2.5 cc/kg containing 0.5 g/kg of fat. The resultant lipemia was studied for 4 hours. In the normal series and in the disease groups with slight changes, it proved best to treat the disappearance curves as exponential curves. The rate of elimination was determined by comparing the curves for the experimental values with sets of exponential model curves. In the controls, the rate of elimination was retarded during the first 2-3 weeks of life. Subsequently an acceleration occurred until about school age. The amount of injected fat eliminated per half hour was 55% in 0- to 1-month-old infants, 61% in 1- to 12-month-old infants, and 69% in the age group 1 to 7 years. In the premature infants, the rate of elimination was the same as in the full-term infant of the same age. . . . The influence of various organs and diseases on the elimination of intravenous fat, and the role possibly played by variations in the protein metabolism are discussed. —From Summary.

596. LARROCHE, J. C., NODOT, A., & MINKOWSKI, A. (Clinique obstétricale Baudielocque, Paris) **Développement des artères et artérioles pulmonaires de la période foetale à la période néonatale.** *Biol. Neonatorum*, 1959, 1, 37-60. Histological studies of the arteries and arterioles of the lungs during intra-uterine life and the neonatal period showed the following findings: (1) Up to four months of gestational age the elastic arteries and up to five months of gestational age the musculo-elastic arteries and arterioles have extremely narrow lumina compared to the overall diameters of the vessels. (2) After these gestational ages and up to the end of intra-uterine life, the lumina become slightly wider but remain still narrow and the vessels show only slight evidence of being functional. (3) At birth a certain lapse of time is required before the vessels acquire their full caliber. In the newborn who dies within the first three days of life the vessels are practically unchanged. After the 10th day of life, the lumina becomes wider and the arteries and arterioles are wide-open. (4) These findings were observed both in full-term newborn and in five month premature infants who had lived more than 10 days. Gestational age is less important than the duration of the functional activity of the vascular net of the lungs. Maturation is less important than functional activity for the development of a normal caliber of the vessels. —Authors' Summary.

- 597.** LUKES, JIRI, & SOLC, JIRI. *Metabolismus cholinu u kojencu. Vylucovani glykokolbetainu moči.* (Choline metabolism in infants. The urinary excretion of glycolbetain.) *Cesk. Pediat.*, 1958, **8**, 892-895. Newborns, infants and young toddlers excrete glycolbetain spontaneously, mostly in amounts of 5 to 10 mg. daily. The frequency of excretion decreases in children over 4 months of age and over 10 kg. of body weight stops with few exceptions. After administration of choline, betaine excretion is raised and can demonstrate the presence of an active cholinoydase system in infants. In older children only one case of scleroderma showed betaine excretion. —English Summary.
- 598.** MASOPUST, J. *Zmeny globulinu v detském věku. I. Metodika a fysiologické hodnoty.* (Changes in gamma-globulin in childhood. I. Methods and physiological values. *Cesk. Pediat.*, 1959, **14**, 147-155. (1) A paper-electrophoretic method for determination of gamma globulin is described. (2) The physiological values in various age groups are reported. —English Summary.
- 599.** MINKOWSKI, A., SWIERCZEWSKI, E., CHANES-BEL, C., & GIBELIN, C. (Clinique Baudelocque, Paris) *A propos de la carence en tocophérol du nouveau-né: transfert au foetus du tocophérol (nouvelle préparation en émulsion), injecté a la mère pendant le travail.* *Etudes Neo-Natales*, 1958, **7**, 81-88. Injection of a new preparation of tocopherol (in emulsion) has been given to the mother prior to delivery in order to prevent low tocopherol levels ($< 300 \mu\text{g p. ml}$) in the fetal arterial blood. A quantity of 300 mg has been estimated necessary and sufficient to achieve this result. This is exactly in agreement with what has been observed by us in giving a supplementary intake to the mother per oral route; this way of administration (because of the amount given) causes eventually gastric intolerance so that the new preparation gives the same result with no side-effect. No correspondance (sic) between % hemolysis test and tocopherol level in the fetal cord blood has been observed. —Authors' Summary.
- 600.** MURTAGH, JUAN J., VIDELA, C. E. MARTINEZ CASTRO, MARENZI, AGUSTIN D., & BRAEGGER, ELSA. (Instituto de Maternidad Alberto Peralta Ramos, Buenos Aires, Argentina) *Plasma electrolytes during the neonatal period.* *Etudes Neo-Natales*, 1957, **6**, 150-156. With the purpose of studying the Acid-Base and Ionic Equilibrium 860 blood determinations of different electrolytes (carbon dioxide, chlorine, proteins, phosphorus, lactic acid, ketonic compounds, sodium, potassium, calcium, and magnesium) have been carried out in 218 new-born infants. The samples were taken on the first, third, fifth and tenth days of life. On the first day, a slight deviation of the A.B.E. towards a metabolic acidosis with hypochloremia was observed, with a slight increase of the organic acids. On the third day, a further increase of the unbalanced conditions of the A.B.E. was noted, together with a nearly significant descent of carbon dioxide, the descent of chloride, the significant increase of phosphorus and cetonc (sic) bodies, and the great increase of potassium. On the fifth day, normal values were observed. That situation continued to the tenth day. The basemia (ionogram) showed only few changes during the different days studied, with values similar to the aforementioned. It is specially worth of being pointed out the unbalanced state of electrolyte metabolism during the third day, and its entire recovery on the fifth. . . . —From Authors' Summary.
- 601.** NIEMINEN, TAPIO. (Univer. of Helsinki) *The galvanic excitability of premature infants.* *Ann. paediat. Fenniae*, 1958, **4**, 196-201. The galvanic excitability (rheobase) of a series of 100 premature infants was investigated. It was found to be considerably less than in full-time infants. On consideration of the premature infants' birth-weight, weight at the time of investigation, and age, it was found that only their age is correlated with electric excitability. It was also observed that the electric excitability of premature infants is slightly increased during the light and warm season. —Author's Summary.
- 602.** RÖSSLER, MIROSLAV (Dětská klinika, Praha 2), & RASKA, BLAŽEJ. *Vliv teploty na mozkovou aktivitu u malých dětí, králíků a králíčat.* (The influence of temperature on cerebral activity in young children and rabbits.) *Cesk. Pediat.*, 1959,

14, 230-235. The influence of a raised temperature on EEG changes in 52 children, neurologically normal or with a fever from a simple respiratory infection, and the effect of an induced hyperthermia in 47 adult and 24 young rabbits, has been followed. . . . 29 of 52 children showed a slowed frequency in the EEG. 23 had normal records at all temperature ranges (max. 40.6°C.). The occurrence of slowing was not dependent on the actual level of hyperthermia at less than critical temperatures (40.6). . . . The fact that a slow frequency can occur at a high temperature both in patients and in animal material in some, but not all, subjects, can be explained in terms of the potentially paroxysmal character of the delta wave and slow frequencies in general, and will explain why some children convulse with not unusual fevers. —From English Summary.

603. SCHULZ, JEANETTE, & VAN CREVELD, S. (Univer. of Amsterdam) **Stuart-Prower factor in newborn infants.** *Etudes Neo-Natales*, 1958, 7, 133-142. The Stuart-Prower factor is a recently discovered clotting factor, present in normal plasma and serum, and essential to the first and second phases of coagulation. Since various coagulation defects are known to be prevalent among premature infants, the levels of the Stuart-Prower factor in the blood of healthy premature infants was assayed. Blood was obtained by heel prick from 24 premature infants, on the first, third and sixth days of life. Stuart-Prower determinations were done by the method of Bachmann et al. The levels of this factor at birth were found to be lower than those of adults, but approached normal by the sixth postnatal day. —D. H. Eichorn.

604. SMITH, CLEMENT A. (Harvard Med. Sch.) **Resuscitation and respiration in newborn infants.** *Ann. paediat. Fenniae*, 1958, 4, 129-146. After a discussion of available data, the author concludes: "One useful development seems to be the disclosure of respiratory rate as perhaps the most significant measure of the advance or resolution of pulmonary disturbances in the newborn. Minute volume increases with distress and falls with improvement, but it does so essentially because rate is increased, since tidal volume may be expected to remain fairly unchanged. Work increases as the infant's distress progresses, especially because rate of breathing is increased. This central importance of change of respiratory rate has been noted by others . . . as a most useful early sign. Accurate counts of rate may give information of more value than one can get from the less easily measurable tidal volumes. Secondly, if further work continues to show that the compliance and the vital capacity of the newborn infant's lungs are in more or less linear relationship, the clinician may be able to measure his patients' condition by simple spirometry as well as by the more elaborate methods requiring esophageal catheterization. It may be that a great deal of work has been done only to prove that one could learn almost as much merely by counting the breaths per minute and measuring the largest ones the protesting infant is able to make. Finally, the comparisons one can make between infants and adults are to me reassuring. I hope you will also be comforted to learn that our patients, small and weak though they may be, actually are both effective and efficient in their respiration."

605. SRÁCKOVÁ, DANUŠE. **Sledování krevního obrazu, počtu erytroblastů, retikulocytů a hladiny bilirubinu v krvi v prvním týdnu života u novorozenců.** (Follow-up of the blood count, erythroblast and reticulocyte counts, and blood bilirubin levels, in the first week of life in the newborn.) *Cesk. Pediat.*, 1958, 8, 945-951. The above tests were carried out in 100 normal newborns in the first six days of life. The results are presented in tabular form. —English Summary.

606. TÖRNWALL, LARS, LIND, JOHN, PELTONEN, TUOMAS, & WEGELIUS, CARL. **The gastro-intestinal tract of the newborn. I. Cineradiographic findings.** *Ann. paediat. Fenniae*, 1958, 4, 209-226. "Since cineradiography with image intensification became available, the possibilities of objective registration and analysis of the dynamics of the internal organs have been greatly increased. The aim of the present investigation was to utilize this method in order to shed some light on the dynamics of the gastro-intestinal region in the newborn and on the characteristics relating to them. . . . The series comprised 85 children born at the South Maternity

Hospital in Stockholm. The majority of the infants were aged 3 to 5 days, the youngest belonging to the 'first meal' group from the age of 1 hour. In all these cases the examination included the oesophagus, the stomach and the duodenum, in 27 also the intestinal canal, i.e., the whole gastro-intestinal tract. 26 cases were examined twice or several times. The 'first meal' series comprised 11 cases."

607. TUCHMANN-DEUPLESSIS, H. (Clinique Baudelocque, Paris) *Études des glandes endocrines des anencéphales. Déduction sur les corrélations hypophyso-nerveuses du fœtus humain.* Biol. Neonatorum, 1959, 1, 8-32. The study of the endocrine glands—pituitary, adrenal, thyroid and gonads—of anencephalus shows the fundamental role of the fetal hypophysis in endocrine regulations. The hypophyseal control is, however, less marked in the fetus than in adults. Whereas the development of the adrenal cortex and the thyroid requires a prolonged hypophyseal stimulation, that of the gonads may take place even in the absence of the pituitary. Of all the endocrine glands, only the adrenal cortex presents marked changes, such as atrophy of the fetal and definitive zones. The study of the mechanism of adrenal cortical atrophy leads to consideration of the role of the upper nervous centers in regulating the functions of the adreno-hypophysis. The reactions of the endocrine glands of anencephalus suggests a control of the fetal hypophysis through the central nervous system. The nervous control of the hypophysis especially involves the corticotrophic function and, to a much lesser extent, the thyrotrophic and gonadotropic functions. It seems that the destruction of the brain inhibits only the secretion of ACTH, without preventing the release of the other hypophyseal hormones in sufficient amount to insure the normal development of the thyroid and gonads. —Author's Summary.

608. TYLER, EDWARD T. (Univer. of Calif. Sch. Med., Los Angeles), & **OLSON, HENRY J.** *Fertility promoting and inhibiting effects of new steroid hormonal substances.* J. Amer. med. Ass., 1959, 169, 1843-1853. Synthetic, orally active substances with effects resembling those of progesterone have become available. They differ not only in dosage but also in the details of their action on various organs. Their double effect in preparing the uterus for nidation and suspending ovulation should make them useful in both the positive and negative aspects of planned parenthood. The antifertility action has been tested by 715 patients using five different preparations. After exclusion of imperfect data there remained observations on 3082 months of therapy with 22 pregnancies, giving a pregnancy rate of 8.6% as compared with about 4% for other contraceptive measures. Both unfavorable and favorable side-effects were reported. The use of progestational drugs in this way depends not only on local but on systemic actions, the extent of which has not been completely determined. Nevertheless, it suggests a relatively simple form of family planning in addition to other important uses in gynecology and obstetrics. —Journal Summary.

609. The prognosis in juvenile obesity. Nutrition Rev., 1959, 17, 99-100. There is no doubt at present that obesity among school children is an important nutritional problem. More than 10% of the school children investigated in two communities were obese. A retrospective study of the role of juvenile obesity in adult obesity has recently been done by A. G. Mullins in a British medical out-patient department. The age, sex, height, and weight of 373 consecutive patients were recorded. 100 of these patients were 20% or more overweight when compared with the standard tables of W. F. F. Kemsley. Of these patients, those that had been known as "fatty" at school were classified as a juvenile obese group. This obese group included 26% of the men and 44% of the women. The degree of obesity was classified as mild, moderate, or severe depending on the relative per cent overweight. On this basis, the juvenile obese group made up 53% of those classified as severely obese but only 12% of those with mild obesity. Treatment of these patients consisted of putting them on a bulky low-calorie diet and re-educating their eating habits on an out-patient basis. When the results were analyzed, it was found that one-quarter of the juvenile obese group had lost 30% of their excess weight during a four-month period, but there were no good results defined as reduction to within 20% of standard weight. Good results were achieved in 14% of the adult obese group during the same period of time.

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This study suggests that persistent juvenile obesity makes up a very significant proportion of adult obesity and that juvenile obesity patients tend to predominate among adults who are severely obese. Adults who have been obese since childhood are also more difficult to treat, and this is the challenge that faces those who are responsible for the medical care of school age children. It is not unreasonable to suppose that prevention of obesity in school age children would be followed by a significant reduction in the incidence of obesity in the adult population. Obesity among school children must be recognized as an important public health problem. —P. S. Peckos.

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610. ABALLÍ, ARTURO J. (Univer. of Havana, Cuba), **LÓPEZ BANÚS, VALERIANO, de LAMERENS, SERGIO, & ROZENGVAIG, SIMÓN.** **Coagulation studies in the newborn period. III. Hemorrhagic disease of the newborn.** *Amer. J. Dis. Child.*, 1959, **97**, 524-548. A group of 26 cases of hemorrhagic disease of the newborn is reported. The majority of these (17) have been investigated by modern coagulation techniques. The findings in these cases have been very similar but much severer than those of so-called physiological hypoprothrombinemia of the newborn. The most outstanding alterations have been an almost complete depletion of proconvertin (stable factor), with a reduction of true prothrombin, and a very prolonged one-stage prothrombin time. The clotting time is prolonged, but the bleeding time is within normal limits. In addition there is a very marked alteration of the first stage of coagulation. . . . —From Authors' Summary and Conclusions.

611. ABALLÍ, ARTURO J. (Univer. of Havana, Cuba), **LÓPEZ BANÚS, VALERIANO, de LAMERENS, SERGIO, & ROZENGVAIG, SIMÓN.** **Coagulation studies in the newborn period. IV. Deficiency of Stuart-Prower factor as a part of the clotting defect of the newborn.** *Amer. J. Dis. Child.*, 1959, **97**, 549-554. By means of various mixtures of sera subjected to the thromboplastin generation test and the test for determination of proconvertin, we have obtained abundant evidence indicating the existence of a deficiency of Stuart-Prower factor in the serum of newborn infants. This was particularly marked in those infants who had not received vitamin K. A presumptive test for Stuart-Prower factor was tried, and it also gave abnormal results in every instance. Again it showed the greatest alteration in untreated newborns. Our data show that a deficiency of the Stuart-Prower factor is an important part of the clotting defect of the full-term newborn. —Authors' Summary and Conclusions.

612. AHVENAINEN, E. K. (Children's Clinic, Univer. of Helsinki) **Clinical symptoms of respiratory disorders in the newborn. V. Differential diagnosis between pulmonary, cerebral, and cardiac disorders.** *Ann. paediat. Fenniae*, 1959, **5**, 1-13. With special reference to 83 patients, 40 of whom died, the differential diagnosis of respiratory disorders in the newborn is discussed. The commonest symptom seen in cerebral, cardiac, and pulmonary disorders was cyanosis. It differed, however, in type and degree in the different cases, and is of value in differential diagnosis. It is possible to make the differential diagnosis in many cases when all the available information is carefully evaluated and the symptoms weighted not only qualitatively but quantitatively as well. —Summary.

613. AHVENAINEN, E. K., & VEISTOLA, TAPIO. (Regional Hosp. of Central Finland) **Evaluation of the newborn infant.** *Ann. paediat. Fenniae*, 1959, **5**, 27-32. Apgar's method of evaluation of the newborn infant was tested when the assessment was made by various persons, chiefly midwives. It was found that there was a good correlation between the scores and the neonatal mortality. It is suggested that this method ought to become into general use throughout the country. The method is helpful in routine clinical work and in research work as well. —Summary.

614. AVERY, MARY ELLEN (Harvard Med. Sch., Boston, Mass.), & **MEAD, JERE**. **Surface properties in relation to atelectasis and hyaline membrane disease.** *Amer. J. Dis. Child.*, 1959, **97**, 517-523. Recent observations suggest that a low surface tension in the lining of the lung may permit stability of the alveoli at end-expiration. Lacking such a material, the lung would be predisposed to collapse. Measurements of the surface tension of lung extracts confirm the presence of a very surface-active substance in lungs of infants over 1,100 to 1,200 gm. and in children and adults. In lung extracts of very small premature infants and infants dying with hyaline membrane disease the surface tension is higher than expected, suggesting that the surface active material is deficient. The possible role of this deficiency in the pathogenesis of hyaline membrane disease is discussed. —Authors' Summary.

615. BARR, ROBERT N. (Minn. Dept. of Health, Minneapolis), **BAUER, HENRY, KLEINMAN, HERMAN, JOHNSON, EUGENE A., MARTINS da SILVA, MAURICIO, KIMBALL, ANNE C., & COONEY, MARION K.** **Use of orally administered live attenuated polioviruses as a vaccine in a community setting—a controlled study.** *J. Amer. med. Ass.*, 1959, **170**, 893-905. The attenuated strains developed by Dr. Herald R. Cox were used. The subjects were married University of Minnesota students and their children—288 adults and 263 children. The volunteers were divided into two groups: the first group received the placebo during the first 76 days and then the viruses from the 78th to 139th days, while the reverse was the case for the second group. The participants did not know until the end in which group they had been placed. No particular type of symptom or reaction marked the entrance of the virus into the body. The children, and to a lesser extent the adults, receiving the virus manifested a generally increased titer of neutralizing antibody. The positive responses occurred despite the fact that a substantial number of the participants had previously received Salk vaccine. "The results of this study are sufficiently encouraging to lead to the hope that the replacement of virulent polioviruses by attenuated polioviruses will effect the same degree of eradication for poliomyelitis as has been achieved for smallpox by replacing the variola virus with the vaccine virus." —I. Altman.

616. BARRETT, CLARENCE D. (Detroit Dept. of Health, Mich.), **TIMM, EUGENE A., MOLNER, JOSEPH G., WILNER, BURTON I., FAHEY, MARTHA F., & McLEAN, I. WILLIAM, Jr.** **Multiple antigen for immunization against poliomyelitis, diphtheria, pertussis, and tetanus. II. Response of infants and young children to primary immunization and eighteen-month booster.** *Amer. J. publ. Hlth*, 1959, **49**, 644-655. A new multiple antigen containing poliomyelitis vaccine was given to well children from the child health clinics of the Detroit Department of Health. Of 300 children admitted to the study, 224 completed the three-dose schedule; they ranged from 2½ months to 5 years in age. Children under 6 months of age at the start were given a fourth dose. A booster dose was given about 18 months later. "... a satisfactory antibody response to all antigen components" was induced. "The fourth dose given to the younger infants greatly improved their seroimmunological status and brought their antibody levels in line with those obtained in older children with only three doses. The booster dose of this multiple vaccine was found extraordinarily effective in enhancing the seroimmunological status of the children to all three types of poliovirus and to the bacterial components contained in the vaccine. This uniformly high response to the booster dose occurred regardless of the age at which primary immunization was begun and regardless of the antibody level following the primary series. The booster response was found to be a far more meaningful criterion for evaluating the effectiveness of the polio vaccine components than were serum antibody levels postprimary. No clinical reactions of any serious consequence were reported or observed." —I. Altman.

617. BEINFELD, HENRY H. (Long Island Coll. Hosp., Brooklyn, N.Y.) **Ways and means to reduce infant mortality due to suffocation: Importance of choanal atresia.** *J. Amer. med. Ass.*, 1959, **170**, 647-650. "Choanal atresia, bilateral and unilateral, is seldom recognized as one of the causes of asphyxia in newborn babies and in infants up to 5 months of age who are found dead in their cribs or carriages,

but more attention should be given to this condition if infant mortality is to be reduced." Statistics on the incidence of such occurrences are not available since atresia is not listed as a cause of death by suffocation. Anatomy, diagnosis, and treatment are outlined. It is urged, among other steps to reduce infant mortality from this cause, that medical schools teach the importance of this condition and that an examination for atresia be made in all cases of asphyxia neonatorum, when atelectasis is present, or no other cause of death can be found. —I. Altman.

618. BELL, J. (Galton Lab., Univer. Coll.) **On rubella in pregnancy.** *Brit. med. J.*, 1959, **1**, 686-688. Clinical information from some 100 published papers on 712 cases of rubella during pregnancy has been tabulated to determine the relationship between the viral infection and risk of congenital defect in the child. Cataract, deafness and heart anomaly, singly or in combination were the most commonly noted abnormalities. The data point out again a definite correlation between the presence of congenital defect and the age of the fetus at exposure. —W. W. Sutow.

619. CASSELS, DONALD E. (920 E. 59th Street, Chicago, Ill.) **Use of the stethoscope in pediatric cardiology.** *J. Amer. med. Ass.*, 1959, **170**, 781-783. Despite recent developments in diagnostic aids, the stethoscope continues to be a major instrument in pediatric cardiology. Four characteristic murmurs or cardiovascular noises not related to disease occur in children up to 12 or 15 years of age. These are described. The usefulness of the stethoscope is not limited to auscultation of the chest; following hemodynamic sounds either to their point of maximum intensity or to their disappearance often leads to the neck and head. The stethoscope is the only instrument sufficiently versatile to permit bedside investigation of these interesting and significant phenomena. —I. Altman.

620. CHURCHILL, JOHN A. (Henry Ford Hospital, Detroit, Mich.) **The relationship of epilepsy to breech delivery.** *EEG clin. Neurophysiol.*, 1959, **11**, 1-12. In a group of (92) patients with epilepsy whose EEG's revealed diffusely distributed, bilaterally synchronous, spike and slow wave discharges the proportion of breech born individuals (19.6%) was found to be significantly greater than the proportion of breech birth (3.4%) in the general population. In contrast, the proportion of breech born individuals (2.8%) in a group of epileptic patients with localized EEG disturbances did not differ significantly from that in the general population. The proportion of breech born in a group of (20) patients who had petit mal seizures and also in a group of (20) patients with "classical spike and wave" was significantly greater than that in the general population. The high incidence of breech birth in patients who have epilepsy of the type associated with bilaterally synchronous spike and wave EEG disturbances strongly suggests that breech delivery is an important factor in the pathogenesis of this disorder. Breech delivery does not appear to be an important factor in the origin of focal cerebral seizures. —Author's Summary.

621. DANOWSKI, T. S. (Univer. of Pittsburgh Sch. Med., Pa.), VAN DIERMEN, J., HEINEMAN, A. C., Jr., & MATEER, F. M. **Muscular dystrophy. X. Endocrine and electrolyte effects of methyltestosterone-KCl therapy.** *Amer. J. Dis. Child.*, 1959, **97**, 555-560. Boys with juvenile muscular dystrophy treated with methyltestosterone Linguets, approximately 10 mg. per day for 12 to 24 months, together with 3 gm. potassium chloride per os, developed a mild adrenogenital syndrome as indicated by increased penile length, decreased size of testicles, and slight acceleration of skeletal age without change in body dimensions or configuration. No measurable gonadotropins were found in the urine of these patients when they reached the age when these hormones are occasionally detectable; this was presumed to represent anterior pituitary suppression by methyltestosterone. Lower levels of serum protein-bound iodine appeared without clinical or other laboratory evidence of decreased thyroid hormone supplies; this, too, could have been the consequence of suppression of pituitary thyroid-stimulating hormone, but more likely it resulted from decreased binding of thyroxine to serum α -globulin. However, direct effects on thyroidal synthesis of hormone or on its volume of distribution or degradation have not been excluded. The urinary 17-hydroxycorticosteroids fell within the normal

range. The urinary 17-ketosteroids indicate that the rise which might be expected with age in these children did not occur, and, therefore, a suppressive effect of methyltestosterone can be postulated. The blood sugar and serum inorganic phosphorus changes after intravenous dextrose, intravenous insulin, or subcutaneous epinephrine were the same as those seen in untreated muscular dystrophies, i.e., the decrease in serum inorganic phosphorus response to insulin remained less than in normals, and epinephrine evoked the lesser degree of hyperglycemia and hypophosphatemia previously described as a characteristic feature of muscular dystrophy; all of these manifestations are presumably attributable to a diminished muscle mass participating in carbohydrate metabolism. —Authors' Summary and Conclusions.

622. DEKABAN, ANATOLE. (Nat'l Inst. Neurological Diseases & Blindness, Bethesda, Md.) **Arhinencephaly.** *Amer. J. ment. Def.*, 1958, **63**, 428-432. In a proportion of mentally defective patients the underlying pathology consists of malformation of the brain. Arhinencephaly is one variety of a defectively developed brain and is commonly associated with poor intellectual endowment. The septum pellucidum is absent in a considerable proportion of the patients with arhinencephaly and this can be disclosed during life by means of a pneumoencephalogram. A group of children falling into this category is described. Early demonstration of congenital malformation of the brain is of prognostic value. —Author's Summary.

623. de SA, A. E. (K.E.M. Hosp., Parel, Bombay), & **SOONAWALLA, R. P.** **A study of stress responses in children and neonates.** *Indian J. Child Hlth*, 1959, **8**, 138-141. "The study was undertaken in three groups. In the first group, the eosinophil variation before and 24 hours after operation was studied in 25 children who underwent major or near-major surgical procedures under general anaesthesia. In 10 of those, the counts were done at 2 hours, 4 hours and 12 hours after the termination of the operation, in order to estimate short-term fluctuations in the eosinophil count. In the second group, the fall in eosinophils 4 hours after an intramuscular injection of 25 mgm. of A.C.T.H. was studied in a series of 5 children. This was done in order to compare the effects of a known quantity of A.C.T.H. upon the eosinophil count, with that of the surgical procedures studied. The third group was that of the neonates. The eosinophil count was taken immediately after delivery. Of the 61 cases studied, 42 were normal deliveries (14 primiparas, 24 multiparas), 3 were breech deliveries, 6 were forceps deliveries and 10 babies were delivered by Caesarean section."

624. DIKSHIT, S. K., & SHARMA, N. L. (Children's Hosp., K. G. Med. Coll., Lucknow) **Thyroid disorders in infancy and childhood.** *Indian J. Child Hlth*, 1959, **8**, 325-340. An analysis of 19 cases of thyroid disorders in children is presented. This includes one case of sporadic goitrous cretinism and another of teratoma of thyroid. Literature on the subject is reviewed. —Authors' Summary.

625. DOWNING, DANIEL F. (Hahnemann Med. Coll., Philadelphia, Pa.) **Cardiac catheterization in congenital heart disease.** *J. Amer. med. Ass.*, 1959, **170**, 770-772. Experience with more than 2000 cardiac catheterizations has been analyzed with respect to the merits of various techniques, the risks involved, and the value of the information gained. The technique described yields data on the pressure and oxygen content of the blood and on the intensity of the heart sounds at various points in the pulmonary artery system, the right ventricle, and the contributing systemic veins. The view that cardiac catheterization is dangerous should take into account the fact that these patients are examined in all stages of myocardial decompensation and many are in severe cardiorespiratory distress. In this series one death was attributed to the procedure. Because definitive treatment of congenital heart lesions is surgical, the information obtained by cardiac catheterization is needed in order to reduce the number of patients operated on for inoperable defects or denied operation for defects that could be corrected. —Journal Summary.

626. GERFELDT, EWALD. (Inst. Sozialhygiene, Bad Godesberg, Germany) **Differenzierte Krankheitsanfälligkeit und Lebersalter.** *Vita Humana*, 1958, **1**, 19-42. The process of aging is going on discontinuously in integrated processes of structure

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formations and dissolution. These processes are formed in a different way within different phases of life. They become effective as predisposing factors for illness which differ significantly within different age groups and are interfered with by environmental influences such as "milieu," social situation especially, and conduct of life. An analysis of 20,000 records of two great health insurance companies gives the following picture: within childhood colds and infectious diseases are prevailing, within adolescents dental defects, skin diseases and accidents. Early adulthood is affected by accidents, respiratory disfunctions and sexual diseases (for men) and by urethral-sexual diseases as well as disfunctions of metabolism (for women). Later within both sexes heart and circulatory diseases, indigestions and disturbances of mobility are observed. In old age disfunctions of vision and audition as well as of miction come to the other forms of illness. About two thirds of all diseases improve within a month and only 10% require one year or longer. The older one is, the longer it takes until a disfunction can be removed. The differences in the predisposition to certain illnesses between both sexes are conditioned by their different roles in life: in men by work and weather influences, in women by reproduction and household work. In old age health seems to remain stable generally as time or vigor do not permit chronic diseases. A detailed knowledge of the process of aging and predisposition to illness in different age groups forms a good basis for the development of an advanced form of macrobiotics. —English Summary.

627. GIBSON, ROBERT. (Manitoba School, Portage la Prairie, Canada) **Mental retardation in idiopathic infantile hypercalcaemia.** Amer. J. ment. Def., 1958, 63, 433-437. "Although idiopathic hypercalcaemia is not a common disease, its observed association with mental retardation could reasonably be expected to ensure its occurrence in any large aggregate of defectives." A discussion of this condition is followed by a brief history of two cases, found in a survey of over 400 male defectives at the Manitoba School, whose retardation appears to be the result of the severe form of idiopathic infantile hypercalcaemia. —J. W. Fleming.

628. GRABER, T. M. **Thumb- and finger-sucking.** Amer. J. Orthodont., 1959, 45, 258-264. Finger-sucking is a normal habit in the first two or three years. If it goes beyond this, it may cause a lot of permanent damage to the dentition, especially an excessive overjet which may lead to abnormal lip and tongue muscle activity. It is suggested that the placement of an interceptive appliance after the age of three to four years will "eliminate muscle perversions and allow autonomous adjustments of the incipient malocclusion." —W. M. Krogman.

629. HARBISON, JOHN A., & NISHIMURA, KINSUKE. **Pulmonary hyaline membrane disease in the newborn.** Hawaii med. J., 1959, 18, 367-371. Tables show the incidence in two hospitals in Honolulu, also the relation between birth weight and survival time. One case report is given to illustrate the typical course of the disease. —M. E. Smith.

630. HART, GEORGE M. (Northwest Clinic, Minot, N.D.) **Subluxation of the head of the radius in young children.** J. Amer. med. Ass., 1959, 169, 1734-1736. Subluxation of the head of the radius occurs frequently in children aged 2 through 4 years, resulting from a combination of pulling and twisting forces. A method for reducing the subluxation by manipulation is described. This involves supination of the forearm with the elbow-extended, accompanied by slight pressure over the head of the radius and compression of the shaft of the radius against the capitellum of the humerus. After reduction the arm should be supported by a sling for several days and traction on the forearm should be avoided for several weeks. Seven cases are described. —I. Altman.

631. HJELT, L., & HAKOSALO, J. (Children's Hosp., Univer. of Helsinki) **Congenital asplenia. Case reports and a review of the literature.** Ann. paediat. Fenniae, 1959, 5, 1-25. Suppl. 12. The clinical and pathological findings on 10 infants with asplenia are presented. Asplenia was diagnosed in all instances at autopsy. The findings are correlated with the data on 21 cases of asplenia described in the literature.

A congenital heart defect was found in 9 cases and in 6 of them the heart defect was considered to be typical in association with asplenia. In connection with asplenia the unsystematic variation in the combination of the anomalies supports the assumption that the period of influence of the primary disturbing factor and the primary affected area in the embryo varies in different cases. In numerous cases the effect was obviously produced before the age of 5 weeks. As an aetiological factor consideration might in some cases be given to the disturbed relation between the ovum and the uterus, which might result in disorders of the umbilical and early embryonic circulation. A markedly pathological placenta was found in three of our cases. The admittedly poor prognosis is ascribed to the tendency towards infection and thrombosis. Histological examination revealed thrombi in the lungs, the liver and the pancreas. Attention is also directed to the high post-operative mortality rate. —Summary.

632. HJELT, L., KUNNAS, M., & WALLGREN, G. R. (Univer. of Helsinki) **Microscopic sex determination.** *Ann. paediat. Fenniae*, 1958, **4**, 92-97. The Feulgen stain reveals sex bodies and drumsticks, a fact which indicates a high desoxyribonucleic acid content and proves their chromosomal character. Many investigators have expressed the view that the XX chromosome pair gives rise to the chromatin body linked with female sex. In some animal species, however, the chromosome combination XX results in the male sex and yet, according to the available information, the sex bodies occur in the female. Another theory is that the sex bodies are part of a chromosome which in normal development results in female sex. This would also explain the presence of sex chromatin in male individuals while simultaneously this theory presumes the occurrence of individuals of varying degrees of femininity or masculinity. Determination of chromosomal sex may well be performed on children. To make the examination reliable we prefer parallel sex determination of blood and mucosal smears. Where skin biopsy can be performed in connection with some other measure, this opportunity for further confirmation of the diagnosis should naturally not be neglected. The clinical significance of chromosomal sex determination cannot yet be completely predicted. In children this investigation is called for in cases of pseudohermaphroditism, hermaphroditism, gonadodysgenesis and extreme hypospadias, as well as in other hormonal or anatomical disturbances in the urogenital sphere. —Authors' Discussion.

633. HORÁLEK, F. (Porodnicko-gynekologická klinika, Olomouci) **Sexuální chromatin v placentě.** (Sex chromatin in the placenta.) *Cesk. Pediat.*, 1959, **14**, 428-431. The diametrically opposite functions of the foetal and maternal parts of the placenta do not influence the sex characteristics of both tissues, as shown by the sex chromatin in cell nuclei of this organ. Investigation of sex characteristics of cells assists the determination of the sex of intersexes, along with other methods, where adequate clinical investigation is not possible. The sex chromatin of the placenta does not involve trauma to the skin of the newborn and enables correct treatment from birth. —English Summary.

634. HORSTMANN, DOROTHY M. (Yale Univer. Sch. Med., New Haven, Conn.), **NIEDERMAN, JAMES C., & PAUL, JOHN R.** **Attenuated Type 1 polio-virus vaccine: Its capacity to infect and to spread from "vaccinees" within an institutional population.** *J. Amer. med. Ass.*, 1959, **170**, 1-8. Three trials were carried out in an institutionalized population of juveniles. In the first, 20 children were fed Sabin's L Sc type 1 virus; 10 children were in the Salk-vaccine "immune" group and 10 were naturally immune. All of the first group became infected, whereas only 2 of 9 in the second group became infected. The second trial, 16 weeks later, was carried out on 11 of the same children. All 11 had at least one positive specimen, but excretion of virus was briefer and more intermittent than on initial feeding. Lower dosage was used on the third trial and indicated that dosage is important in initiating reinfection. The results indicated further "that a 'local immunity phenomenon' can be demonstrated in the human alimentary tract; this is shown by the relative resistance of previously exposed persons to implantation of virus and alimentary infection. This kind of resistance seems to be closely related to a previous topical experience with poliovirus rather than to circulating antibody." —I. Altman.

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635. KAY, JEROME H. (Univer. Southern Calif. Sch. Med., Los Angeles), **ANDERSON, ROBERT M., LEWIS, RUBIN R., MEIHUS, JOHN E., MAGIDSON, OSCAR, & SHAPIRO, MORSE J.** **Complete correction of the tetralogy of Fallot by open-heart surgery.** *J. Amer. med. Ass.*, 1959, **170**, 792-794. In patients with the tetralogy of Fallot, open-heart surgery has advantages over the palliative operations permitted by older techniques because it is generally able to correct the underlying defect of the interventricular septum. This report concerns 10 consecutive patients in whom the defects were completely corrected with use of a heart-lung machine capable of oxygenating and delivering more than 5 liters of blood per minute. Details of anesthetic and surgical procedure are given. The period of cardiopulmonary bypass lasted from 22 to 49 minutes. There was one operative death. The nine other patients showed striking improvement. . . . Since further reduction of operative mortality is anticipated, the new technique greatly improves the prognosis of patients with the tetralogy of Fallot. —Journal Summary.

636. KEITEL, HANS G. (Jefferson Med. Coll., Philadelphia, Pa.) **The concentration of potassium in the plasma.** *Amer. J. Dis. Child.*, 1959, **97**, 583-589. (With the technical assistance of Jocelyn Blakely) The concentration of potassium in the plasma of premature infants of varying ages ranging in weight from 2 to 5 lb. (0.9 to 2.3 kg.) was determined, using a standardized method of procuring, separating, and analyzing the blood samples, and taking special note of the intake of potassium. The plasma potassium concentration was found to be directly correlated with the potassium intake. In the first two days of life, most potassium values were in the same range as that found for normal fasting adults. The plasma potassium concentration of normal premature infants receiving an intake of potassium of about 6 mEq. per kilogram would be expected to range from about 4 to 6 mEq. per liter after the third day of life. —Author's Summary and Conclusion.

637. KHALIL, MOSTAFA. (Univer. of Alexandria, Egypt) **The circulating eosinophil level in the newborn infant following normal and difficult labor.** *J. Pediat.*, 1958, **53**, 662-670. The values of circulating eosinophils in the early neonatal period were studied in 61 infants and the following results were obtained: (1) In those infants born after an easy normal spontaneous delivery the mean count at birth was 280 per cubic millimeter. It dropped at 178 per cubic millimeter after $\frac{1}{2}$ hour and to 162 per cubic millimeter after 6 hours. A gradual progressive rise was therefore noticed and the count reached a level of 271 per cubic millimeter on the fourth day. (2) Following difficult noninstrumental labor, the mean eosinophil count at birth was 34 per cubic millimeter. It then increased gradually until it became 241 per cubic millimeter on the fourth day. (3) In those infants delivered by forceps, the mean eosinophil level at birth was 260 per cubic millimeter. It showed a gradual decrease till 12 hours, when it became 140 per cubic millimeter. A progressive rise then started and the level reached the height of 225 per cubic millimeter on the fourth day. (4) Those infants who developed physiological jaundice showed a sharp eosinophilic response of 140 to 340% on the day on which icterus appeared. The effect of anesthesia on the circulating eosinophil level was studied in 10 infants. It was thought possibly to be responsible for the high level in cases delivered by forceps, as compared to those born after difficult noninstrumental labor. It was found that following ethyl chloride and ether an increase in the eosinophil level of 120 to 450% lasted for about 2 $\frac{1}{2}$ hours. It is accordingly suggested that the stress of labor is the factor responsible for the variability of eosinophil level after birth. Physiological jaundice and anesthesia by ethyl chloride and ether are factors which induce eosinophilia. —Author's Summary.

638. KIVALO, ANNIKKI, & KIVALO, ERKKI. (Kiveliä Hosp., Helsinki) **Juvenile amaurotic idiocy. Vacuolization of lymphocytes in the healthy members of families involved.** *Ann. paediat. Fenniae*, 1958, **4**, 191-195. The lymphocytes of the healthy parents and healthy sibs of patients with amaurotic juvenile idiocy were studied. The series consisted of 12 adults and 16 children. It was found that when at least 250 lymphocytes were examined, vacuolization could be observed in about 1%

of them, each cell affected containing an average of 1 to 3 vacuoles. This result is clearly at variance with earlier Scandinavian investigations. —Authors' Summary.

639. LIONAKIS, BASIL (Henrietta Egleston Children's Hosp., Atlanta, Ga.), GRAY, STEPHEN W., SKANDALAKIS, JOHN E., & HOPKINS, W. A. **Empyema in children.** *J. Pediat.*, 1958, 53, 719-725. 133 consecutive cases of acute empyema in children under 14 years of age are presented. They occurred over a 25-year period at the Henrietta Egleston Hospital for Children in Atlanta. Incidence and mortality by age, sex, year, season, and causal organism are discussed. Incidence and mortality are highest for the youngest children and incidence is constantly higher in boys than in girls. Mortality rate bears little relation to incidence except with respect to age. Chemotherapy has reduced incidence to almost the vanishing point since 1947 but has had no effect upon mortality and morbidity once empyema has developed. Relative mortality from staphylococcus and pneumococcus varies so greatly from year to year that little predictive reliance can be placed on it. . . . —From Authors' Summary.

640. MERTZ, JAMES L. **Peritonitis in infants and children.** *Hawaii med. J.*, 1959, 18, 341-343. The article is based on a study of 61 cases in Kauaikeolani Hospital during the years 1943 to 1958. The author concludes that "Peritonitis related to appendical rupture (35 cases) is common but should yield a satisfactory result. Secondary peritonitis of nonappendical origin in young infants carries a very serious prognosis." —M. E. Smith.

641. NELSON, G. K. (Natl. Inst. Personnel Res., Johannesburg, S. Africa) **The electroencephalogram in kwashiorkor.** *EEG clin. Neurophysiol.*, 1959, 11, 73-84. 1. Serial EEGs were recorded from 33 young African kwashiorkor patients, 10 of whom were anaemic. Serial EEGs were also obtained from 11 control children and single recordings from a further 14 kwashiorkor patients and 27 controls. 2. Abnormal (focal) records were found in 36% of the kwashiorkor patients, all except one in the form of disturbances in the temporal region. Most of the abnormalities were seen in sleep records. 3. During recovery there was usually a marked increase in dominant EEG frequency and in response to photic stimulation. The dominant frequencies of the kwashiorkor children were mostly below the range for normal American children of the same age, even after clinical recovery. No comparable serial EEG changes occurred in the controls, and dominant frequencies were similar to those of normal American children. 4. The changes in dominant frequency during recovery might reflect an impeding effect of kwashiorkor on the development of brain rhythms in childhood. This effect may persist into adulthood. 5. Neither anaemia nor BMR appear to be responsible for the EEG changes, whereas psychological factors may be of significance. —Author's Summary.

642. NOUR-ELDIN, F. (United Manchester Hospitals), & WILKINSON, J. F. **A congenital blood-clotting anomaly resembling coumarin-induced defect.** *Brit. med. J.*, 1959, 1, 1161-1162. The hematologic and clinical findings in a 6-year-old boy with a mild bleeding tendency are described. The laboratory data suggested that the blood-clotting defect was basically similar to that produced by coumarin drugs. No beneficial effects however were produced by the administration of vitamin K. No other associated congenital abnormalities were demonstrated. —W. W. Sutow.

643. PLOTKIN, STANLEY A. (Wistar Inst., Philadelphia, Pa.), JERVIS, GEORGE, NORTON, THOMAS, STOKES, JOSEPH, Jr., & KOPROWSKI, HILARY. **Persistence of antibodies after vaccination with living attenuated poliovirus.** *J. Amer. med. Ass.*, 1959, 170, 8-12. Type 2 poliomyelitis antibody was present in all of 7 children approximately 8 years after administration of the TN strain of living attenuated poliovirus. Type 1 poliomyelitis antibody was present in all of 7 children approximately 4 years after administration of the SM strain of living attenuated poliovirus. Of 13 infants under 6 months of age at vaccination, 12 retained homotypic antibodies 1 to 2 years after feeding of the SM (type 1), CHAT (type 1), TN (type 2) or Fox (type 3) attenuated strains. The only child who no longer had demonstrable

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antibody to the type originally given was shown to be relatively insusceptible to intestinal reinfection by homotypic virus. —Authors' Summary.

644. SALK, JONAS E. (Univer. of Pittsburgh Sch. Med., Pennsylvania) **Polio-myelitis vaccine preparation and administration: Analysis of basic premises and current practices.** J. Amer. med. Ass., 1959, 169, 1829-1838. The question of vaccine effectiveness has been discussed from the viewpoint of possible reasons for the occurrence of poliomyelitis in vaccinated individuals. Our data indicate that when vaccines of relatively high potency are used for primary and booster doses, responses are observed in a high proportion and little or no decline in antibody occurs in the interval between one and two years after the booster dose. Similar effects were not observed when vaccines of lesser potency were used. A survey made in May, 1958, covering more than 2700 children in the first three grades of school who were said to have had three doses of vaccine administered by private physicians or in school programs, revealed that 9.1% had no detectable antibody to type 1, 0.5% had none to type 2, and 18.7% had none to type 3. The weight of evidence suggests that the low levels for type 1 and 3 are not due to waning immunity but to failure to induce a change initially as a result of the use of vaccines of less than optimal vaccine potency. A fourth dose of a selected lot, given to 462 children who had little or no antibody to one or more types, induced a substantial antibody rise in the majority, indicating that immunological sensitization had been induced in most, but not in all, by the earlier doses. —Author's Summary.

645. SCHERZ, ROBERT G., & GEPPERT, LEO J. (Walter Reed Army Med. Center, Washington, D.C.) **Recognition and treatment of adrenal crises in the newborn infant.** J. Pediat., 1958, 53, 645-661. (1) Four cases of adrenogenital syndrome, salt-losing type, are presented. They demonstrate the clinical picture of adrenal crisis in the neonatal infant. . . . (3) Typically, the initial crisis occurs on the seventh day of life. The crisis is characterized by a lethargic infant with a gray pallor, vomiting, weight loss, hypotension, hyperkalemia, hyponatremia, hypochloremia, and dehydration. The excretions of pregnanetriol and 17-ketosteroids in the urine are elevated. . . . —From Authors' Summary.

646. STEINBERG, ISRAEL. (N. Y. Hospital—Cornell Med. Center, New York City) **Angiocardiography in diagnosis of congenital heart disease in infancy and childhood.** J. Amer. med. Ass., 1959, 170, 772-780. Angiocardiography is the intravenous method of visualizing the cardiovascular structures. It is accomplished by the rapid injection of a concentrated organic iodide solution into an arm vein and making roentgenographic exposures of the cardiovascular system. While it is not indicated in every case, considerable diagnostic data are obtained by such studies. Despite double injections to provide frontal and lateral views, only one fatality occurred in a series of over 1500 infants and children. "Accordingly, because the mortality of congenital heart disease is unusually high, it would appear that the failure to recognize a type of heart disease amenable to surgical repair provides a greater risk than angiocardiography." —I. Altman.

647. SUTHERLAND, JAMES M. (Children's Hosp. Res. Found., Cincinnati, Ohio), OPPE, THOMAS E., LUCEY, JEROLD F., & SMITH, CLEMENT A. **Leg volume changes observed in hyaline membrane disease.** Amer. J. Dis. Child., 1959, 98, 24-26. A method for determining and following the volume of a leg segment of newborn infants is described. The leg volume and body weight of nine normal term and premature infants decreased approximately equally during the first 24 to 34 hours after birth. The relative increase in the size of the leg during a time of decreasing weight was found in six infants with the neonatal respiratory distress syndrome usually associated with pulmonary hyaline membrane disease. —Authors' Summary.

648. TIISALA, RITVA. (Univer. of Helsinki) **Stress reaction to oxygen poisoning in new-born, growing, and adult rats.** Ann. paediat. Fenniae, 1959, 5, 59-66. (1) Using P 32 to test the function of the organ, the effect of a 95% concentration of O₂ was examined at 1 atmospheric pressure in a series of experiments lasting

48 hours on new-born, growing and adult rats. (2) In adult rats the above conditions gave rise to stress reaction. This result is consistent with previous investigations. In the new-born no corresponding result was found. In the 10 day group the reaction was indefinite, while in the 3 week group the reaction occurred in the same direction as that in the adult, though weaker. (3) Non-physiological oxygen conditions evidently affect the organism of the adult rat in a manner similar to the stress factor, thus releasing the GAS. In the new-born rat the results indicate an absence of the capacity for reaction but further research is needed to support this observation. —Summary.

649. TÖRNWALL, LARS (Wenner-Gren Research Lab., Stockholm, Sweden), **LIND, JOHN, PELTONEN, TUOMAS, & WEGELIUS, CARL.** *The gastro-intestinal tract of the newborn. II. Functional disturbances of the motility.* Ann. paediat. Fenniae, 1959, 5, 14-26. 85 clinically normal newborn infants have been examined with the purpose to analyse the dynamics of the gastro-intestinal tract of this age group. The age of the infants varied from one hour to one week, 11 of them had not been fed at all prior to the contrast meal. 19 children had fits of superfluity vomitings. A Philips 5 inch image intensifier connected with an Arriflex 35-mm. cinecamera was used for recording. The method can be regarded as suitable for an analysis of this kind. In this connection must the reduced radiation dosage be mentioned. The findings thus recorded differ from those found in older age groups, and from some earlier ideas, in normal conditions as well as in spontaneous and provoked disturbances. These deviations are discussed. —Summary.

650. VIGNEC, ALFRED J. (New York Foundling Hosp., New York City) *The role of Candida albicans in the common skin disorders of infancy and early childhood.* J. Pediat., 1958, 53, 692-703. A 2-year study involving observations of 1447 infants was conducted to ascertain the role of Candida albicans in the common rashes of infancy and early childhood. There was no correlation between sex and color and the recovery of Candida from the skin. Age was an important factor in that infants under 1 month had more severe rashes and a higher incidence of rashes positive for Candida. . . . —From Author's Summary and Conclusions.

651. VOLEJNÍK, JIRÍ. (Dětská klinika, Olomouc) *Osudy dětských alergiků.* (The fate of allergy in children.) Cesk. Pediat., 1959, 14, 55-59. 64 children with infantile eczema, 37 with asthmatic bronchitis and 33 with bronchial asthma from 2 to 18 years of age have been followed from 1½ to 11½ years from the start of the disease. Eczema was a preliminary to asthma in 26.6% and continued to be manifest in both limited and generalized forms in 45.3%. Asthmatic bronchitis preceded asthma in 18.9%, and was cured after a single occurrence in 81.1%. The majority were infants and small toddlers (83.3%). After deducting from the total of asthmatics those with a history of eczema (18) and previous asthmatic bronchitis (7), the remaining asthmatics numbered 58. Over a period of 1 to 5 years 18.8% have improved without attacks, 43.1% have less frequent and less intensive attacks, and 38.1% are unchanged. —English Summary.

652. WOLF, ALFRED M. (Michael Reese Res. Foundation, Chicago, Ill.), **SHAUGHNESSY, HOWARD J., JANOTA, MARTHA, CHAPMAN, JAMES W., CHURCH, RUTH E., & MOORE, MILDRED.** *Duration of seroimmunity after injection with ultraviolet-irradiated poliomyelitis vaccine: Role of booster inoculations.* J. Amer. med. Ass., 1959, 170, 650-652. The degree and duration of immunity induced by injections of killed poliomyelitis vaccine were studied in 4000 children. A smaller serologically negative group received special study. Antibody titers were measured before and after the primary immunization, before and after the first booster injection, and before and after the second booster injection. The average immune status was raised by the primary vaccination, but it declined during the ensuing year, was raised to a higher level by the first booster, declined less thereafter, and reached its highest level after the second booster. The response to type 2 antigen was better than the responses to types 1 and 3. There were indications that the commercial vaccine used in the later phases of the study was more potent than the experimental

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vaccine used in the beginning. The authors recommend that the primary series of three injections of ultraviolet-irradiated formalin-treated poliomyelitis vaccine be followed by at least one and possibly two booster injections at yearly intervals. —Journal Summary.

PSYCHOLOGY

653. ALEXANDER, IRVING E., & ADLERSTEIN, ARTHUR M. (Princeton Univer.) **Affective responses to the concept of death in a population of children and early adolescents.** *J. genet. Psychol.*, 1958, **93**, 167-177. Affective responses to death words were measured in a population of 108 males between the ages of 5 and 16. Affect was measured by response times and changes in skin resistance on a word association task composed of basal words, a priori affective words, and death words. Three age subgroups were compared: 5 through 8, 9 through 12, and 13 through 16. The group as a whole showed increased emotional involvement with death words on both response measures. Although all subgroups showed significantly increased response time to death words, only the youngest and oldest age groups showed significant decreases in skin resistance. It was felt that there is nothing peculiar to childhood per se to call forth increased emotional responsiveness to death, but "... that some periods of childhood are subjected to rapid and massive increases in psychological stress and as a consequence the decrease in ego stability is likely to be reflected in increased affective responses to death." —J. W. Fleming.

654. ALPER, A. E. (Florida Farm Colony, Gainesville) **A comparison of the Wechsler Intelligence Scale for Children and the Arthur Adaptation of the Leiter International Performance Scale with mental defectives.** *Amer. J. ment. Def.*, 1958, **63**, 312-316. This study investigated the validity of the Arthur Adaptation of the Leiter International Performance Scale. Both the WISC and the Arthur Adaptation were administered to 30 institutionalized, mentally retarded persons ranging in age from 7 to 17 years. Most of the cases were brain-injured or familial. "The correlations of the Arthur Adaptation with the WISC Full and Performance Scales as well as the close relationship between their means and standard deviations seems to indicate substantial validity in this regard. However, the Arthur Adaptation correlates to a much smaller degree with the WISC Verbal Scale." —J. W. Fleming.

655. BADT, MARGIT I. (Children's Hosp., Buffalo, N.Y.) **Levels of abstraction in vocabulary definitions of mentally retarded school children.** *Amer. J. ment. Def.*, 1958, **63**, 241-246. The purpose of this study was to assess the effect of institutionalization on levels of abstracting ability in defining words. The 60 subjects, all of whom attended the academic program at the institution, were diagnosed as idiopathic or familial, were 7 to 15 years of age, and had IQ scores between 50 and 75. The Stanford-Binet, Form L, provided measures of MA and IQ. Plus responses to the vocabulary list of the Binet were judged by three scorers to reflect descriptive, functional, or abstract definitions, and were weighted accordingly. Adequate reliability was obtained among judges. Consistent with the results of previous investigations, it was found that ability to abstract increased with both CA and MA, but to a lesser degree than is customarily found. When MA was held constant statistically, the correlation between length of institutionalization and abstraction was $-.58$. When CA was held constant statistically, the correlation between length of institutionalization and abstraction was $-.71$. "This evidence seems to show that the length of time spent ... in the institution strongly affects the level at which [retardates] define words and manipulate concepts." —J. W. Fleming.

656. BERNFELD, J. **Les contre-indications médicales en orientation professionnelle.** (Medical contraindications in vocational guidance.) *BINOP*, 1959, **15**, 59-72. Examples are given of various physical defects or incipient illnesses which should be considered as serious handicaps in specific occupations. —S. G. Vandenberg.

657. BLAKELY, W. PAUL. (Drake Univer., Des Moines, Iowa) **A study of seventh grade children's reading of comic books as related to certain other variables.** *J. genet. Psychol.*, 1958, 93, 291-301. The subjects for this study were 281 seventh grade children in two public junior high schools in an Iowa city of about 100,000 population. As part of an interest questionnaire, data about the frequency and type of comic book reading were obtained on three separate occasions. Other measures were obtained by the Lorge Thorndike Intelligence Test, Non-Verbal Series; SRA Junior Inventory, Form S; the Haggerty-Olson-Wickman Behavior Rating Schedules, A and B; the Stanford Achievement Test, Advanced Battery; and parental interviews. The only statistically significant result was that comic book readers tended to be greater readers of library books, and that this trend persists without respect to the type of comics read. Children who differed in comic book reading, either as to type or frequency, did not differ correspondingly in reading ability, achievement in language and spelling, general school achievement, behavior problem status, traits related to behavior problem status, or intelligence. "The results of this study for the most part fail to support curtailment of children's access to comic books." —J. W. Fleming.
658. BRACKBILL, YVONNE (Bio-Sciences Information Exchange), & O'HARA, JOHN. **The relative effectiveness of reward and punishment for discrimination learning in children.** *J. comp. physiol. Psychol.*, 1958, 51, 747-751. 43 male kindergarten Ss were run on a three-choice discrimination task. 21 Ss (Group R) were rewarded with candy for correct responses and were not rewarded for incorrect responses. The remaining Ss (Group R-P) were rewarded for correct and punished for incorrect responses (forfeiture of candy). Learning was significantly faster for the latter group. A supplementary study, using 8 Ss of Group R-P, linked GSR reactivity to speed of original discrimination learning. Both sets of results are discussed in terms of effect on learning of level of motivation. —Authors' Summary.
659. CARPENTER, BRUCE, & CARPENTER, JANETH T. (VA Hosp., Gulfport, Miss.) **The perception of movement by young chimpanzees and human children.** *J. comp. physiol. Psychol.*, 1958, 51, 782-784. Lower thresholds for the perception of movement were obtained from two chimpanzees and from two human children roughly matched for maturational level. The results suggest that these thresholds are similar in children and young chimpanzees. —Authors' Summary.
660. CHOWN, SHEILA M. (Liverpool Univer.) **Personality factors in the formation of occupational choice.** *Brit. J. educ. Psychol.*, 1959, 29, 23-33. In order to study the relationship between values, interests, ability, and vocational plans, 96 boys and 96 girls from the third to seventh forms of eight grammar schools were given questionnaires about their interests, behavior, and reasons for choosing their desired occupations. Also, a personality questionnaire in the form of paired sentence choices was completed. Moray House intelligence test data were also available. Correlational and chi square analyses showed practical spare time interests to be related to job choices, and intelligence was shown to be related to flexibility or freedom of choice with the less intelligent limiting their choices to office work. Both personality questionnaires and reasons for choice of occupations were factor analyzed with specific unrelated factors being determined as of consequence in occupational choice. The significance of these results in relation to occupational choice is discussed. —W. D. Smith.
661. COLLMAN, R. D., & NEWLYN, D. (Royal Eastern Co. Hosp., Colchester, England) **Changes in Terman-Merrill IQs of mentally retarded children.** *Amer. J. ment. Def.*, 1958, 63, 307-311. 182 mentally retarded children, age 6 to 15, were tested by the Terman Merrill, Form L, shortly after their admission to special schools and again approximately a year later. The initial IQ range was 42 to 89, with a mean of 68. The coefficient of correlation between test and retest was $+.93$. The mean difference was $+0.121$. The data for 145 subjects could be used to test the Roberts-Mellone Correction Table to adjust IQ scores for their lack of independence of CA. The changes predicted by the tables are in close agreement with observed changes up to the age of about 12 years at the first test: IQ scores tend to fall from 6.0 to

about 11.6 years. The results confirmed the prediction (from the correction table) that the period of stability of IQ scores for mentally retarded children is approximately 11.6 to 12.6 years. The tables also forecast a rise in IQ scores after about 13.0 years, but the mean observed rise was considerably smaller than that predicted. 74 homes were personally investigated to determine whether home conditions were adverse, average, or above average. There was no association between changes in IQ scores and antecedent home conditions. —J. W. Fleming.

662. EISMAN, BERNICE S. (Univer. of Colorado, Boulder) **Paired associate learning, generalization and retention as a function of intelligence.** *Amer. J. ment. Def.*, 1958, **63**, 481-489. Intellectually superior, average, and retarded adolescents, attending a public junior high school were compared with respect to speed of learning a 7-card paired-associate problem, stimulus generalization, and retention over a one-week and one-month period of time. No significant differences among the three groups were found with respect to any of the measures of performance. The possible reasons for this finding are discussed. It was concluded that differentiation among retarded individuals on the basis of performance on different learning tasks might be useful in both applied and research settings. It was further suggested that IQ scores alone are not reliable predictors of learning in certain specific situations. —From Author's Summary.

663. EYFERTH, KLAUS. (Univer. of Hamburg, Germany) **Starrheit und Integration.** (Rigidity and integration.) *Psychol. Rdsch.*, 1959, **10**, 159-169. This article constitutes a theoretical attempt to compare the typological research findings of E. R. Jaensch and T. W. Adorno. Jaensch's "disintegrated type" is confronted with and considered as complementary to Adorno's "rigid authoritarian personality." Jaensch described the "disintegrated type," whom he evaluated negatively, more thoroughly than the "integrated type." Adorno, on the other hand, was much more thorough in his investigation of the "authoritarian type," whom he evaluated negatively, than of the "democratic type." The author claims that both typologies have a political foundation which leads to overgeneralizations concerning the psychological findings. The typologies differ in respect to the developmental factors. Jaensch's typology is genetically determined—the author admits that the genetic theory which underlies Jaensch's typology is no longer acceptable—while the authoritarian personality develops as a reaction to a restrictive authoritarian father figure. Both typologies, however, use as their basic psychological structure the degree of personality integration or disintegration. The authoritarian rigid personality, negatively evaluated in American society, corresponds to the integrated idealized personality described by Jaensch. Jaensch's disintegrated personality, the prototype of which is the Jew, corresponds to Adorno's democratic personality. The author observes a retreat from typological consideration and greater emphasis on the dynamics of individual behavior and general psychological lawfulness. —R. E. Muuss.

664. FINLEY, CARMEN J., & THOMPSON, JACK. (Sonoma Co. Schools, Calif.) **An abbreviated Wechsler Intelligence Scale for Children for use with educable mentally retarded.** *Amer. J. ment. Def.*, 1958, **63**, 473-480. An abbreviated scale of the WISC was determined by selecting the combination of subtests which would best predict Full Scale IQ, and at the same time economic administration time. The five subtests selected were: Information, Picture Arrangement, Picture Completion, Coding, and Block Design. The multiple correlation coefficient was .896. The standard error of estimate in predicting Full Scale Scores was 4.307 scaled score units or 3.123 IQ points. A regression equation was presented for predicting Full Scale scores. In order to simplify the computations using the short form, a table of weighted subtest scores was prepared to accompany the abbreviated WISC protocol. This short form of the WISC was presented as a valid predictor of Full Scale Scores with educable mentally retarded children, the error of prediction being no greater than that of a test-retest situation. —Authors' Summary.

665. GHESQUIERE, JOSEPH L. A. (Inst. of Occupational Hlth, Helsinki) **Interdependence analysis of physical performance and growth in boys.** *Ann. paediat.*

Fennia, 1958, 4, Suppl. 11, 140 p. Physical performances of 177 Finnish boys between 10 and 21 years of age were considered for their relationship to height, weight and age. The physical performance measurements include vital capacity, expiratory force, maximum breathing capacity, hand grip, back lift, and vertical jump. The dependence of the performance scores on height and weight was analysed by means of regression analysis, where the physical performance scores were the dependent variables, and height and weight the independent variables. . . . A simple regression analysis indicated that the physical performances improve more than could be predicted on the assumption of geometric similarity between younger and older boys, especially for the strength tests. A partial regression analysis confirmed these results. It was observed that, by keeping the data constant within the range of one year, the effects of age are practically canceled out altogether. With age thus held constant, the improvement in hand grip seems to be entirely dependent on gain in weight, while for vertical jump, height is the dominant factor. In determining vital capacity, maximum breathing capacity, and back lift, both height and weight are important, but to a varying extent. Besides height and weight, a definite part in improving the physical performance is due to the aging of the boys, especially for the performances where strength is most important. The analysis of variance for both the simple regressions and the partial regressions indicates that there is no significant difference between the regressions at different ages from 10 to 21 when both coordinates are plotted on logarithmic scales. . . . The residual variability is greater for the younger boys than for the older ones in all regressions but those where maximum breathing capacity is the dependent variable, i.e., the scores of vital capacity, hand grip, back lift, and vertical jump of the older boys fall closer together than those of the younger boys. As a final result, a number of performance prediction nomograms are given. On these nomograms, the average performance can be predicted for one-year age groups, given height and weight. An indication of individual variability around the average performance is given, so that it can be established whether the distance of an individual score from the average is worth of special attention, being perhaps "too far" to be considered as normal. The effects of variations in size on physical performance are illustrated in a chapter where the "athletic" performances of animal species different in size are compared. A factor analysis of the same material reveals three factors, one general growth factor, one strength factor, one cross sectional factor, and a possible fourth dead weight factor. This analysis adds no really new information, and the results are more a confirmation of what had already been observed in the regression analysis. —From Summary.

666. GIBSON, D., & GIBBINS, R. J. (Ontario Hosp. Sch., Smiths Falls, Canada) **The relation of mongolian stigmata to intellectual status.** Amer. J. ment. Def., 1958, 63, 345-348. This study was designed to detect any systematic relationship between the number of physical stigmata exhibited by Mongoloids and their degree of amentia. 32 Mongoloids, ages 6 to 17, were the subjects. The physical stigmata were 14 diagnostic signs of Mongolism selected on the basis of ease of recognition and relative age stability within the age limits of the sample. Intellectual status was determined by the 1937 revision of the Binet, or the Kuhlmann. While the correlation of number of stigmata to age was $-.01$, the correlation between number of stigmata and intelligence was $+.63$. The results are discussed in terms of the differential onset of Mongolism in embryo. —J. W. Fleming.

667. GOLDSTONE, SANFORD, BOARDMAN, WILLIAM K., & LHAMON, WILLIAM T. (Baylor Univer. Coll. Med., Houston, Texas) **Kinesthetic cues in the development of time concepts.** J. genet. Psychol., 1958, 93, 185-190. 190 children age 6 through 14, 20 young adults, and 20 older adults were asked to count 30 secs. aloud and to themselves at the rate of one count per sec. Ss' concept of a second was derived from these counts and comparisons were made among age levels and between the two counting methods. Considerable accuracy was obtained in the estimates of a second by the 8 through young adult groups. The estimates of 6 and 7 year and older adult groups were significantly shorter. Counting aloud, which involved more muscle activity, resulted in significantly longer estimates of a second.

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These results are discussed in light of the role of kinesthetic cues in the learning and appreciation of standard units of duration. The relationship between active and passive estimations is also discussed. —Authors' Summary.

668. GORDON, ANITRA, & THURLOW, WILLARD. (Univer. of Wisconsin) **Substitution with interrupted tasks of differing valence.** *J. genet. Psychol.*, 1958, **93**, 303-305. This experiment was designed to determine the degree of substitution obtained when a medium valence task followed an incomplete high or low valence task. Subjects were 32 children whose ages ranged from 4.5 to 6.5 years. Tasks used were objectively dissimilar. Although a large number of children did not show a substitution effect, statistically significant degrees of substitution were found. It is concluded that a medium valence task can provide significant substitution for an incomplete high or low valence task. —From Authors' Summary.

669. HAYES, JOHN R. (U.S. Naval Res. Lab., Washington, D.C.) **The maintenance of play in young children.** *J. comp. physiol. Psychol.*, 1958, **51**, 788-794. Three experiments were performed. In all of them children played one-person games, which they were free to terminate whenever they chose, in successive daily sessions. A marble game, a clicker game, and a game in which S pressed buttons to see a picture were used. The major findings were: (1) The number of responses per session and the duration of sessions decreased markedly from session to session. (2) The decreases resulted from exposure to the games. (3) No decreases in rate of response with continued exposure to the games were found. In some cases reliable increases in rate were found. (4) In Experiment III, the number of responses available to S and the schedule of picture presentation each significantly influenced the rate of response and the number of responses per session. Any change in the independent variables which decreased the number of responses per session also decreased the rate of response. (5) It was shown that a one-dimensional drive variable was not adequate to intervene between the independent and the dependent variables of Experiment III. —Author's Summary.

670. HERTTICH, WERNER. (Naumburg, Germany) **Ein diagnostisches und psychagogisches Verfahren der Wachtraumsforschung.** (A diagnostic and therapeutic method to investigate day dreaming.) *Psychol. Rdsch.*, 1959, **10**, 123-130. A new projective method called "the magic mirror" which consists of completing an unfinished story is discussed. The story begins: "Nobody noticed when the girl (boy) entered the secret room. Once inside she (he) finds herself (himself) in front of the magic mirror. At first the mirror is dull, but soon it fills with a dusky light and the glass begins to glitter. In the depth of the mirror clouds appear and begin to take various shapes. Finally the girl (boy) recognizes what the mirror shows." The subjects are then asked to tell what the mirror showed. Underlying theoretical assumptions both in terms of the instructions and in terms of personality theory are stated. The usefulness of this method is demonstrated by way of children's responses to the magic mirror story. Suggestions for qualitative interpretations are made, there is no attempt to quantify and score responses. —R. E. Muuss.

671. HOEFLIN, RUTH, & KELL, LEONE. **The Kell-Hoefflin Incomplete Sentence Blank: Youth-parent relations.** *Monogr. Soc. Res. Child Develpm.*, 1959, **24**, No. 3. \$2.25. An incomplete sentence blank, a semistructured device to elicit the feelings of the counselee toward his family and his childhood, was developed at Kansas State University and tested with 359 college freshmen at the Ohio State University (Youth Form) and with 642 of their parents (Parent Form). The 20-item blank was designed to measure attitudes toward home backgrounds on a continuum ranging from positive satisfying homes to negative unsatisfying ones. Judges were used to sort in seven categories and responses to the sentence stems from 50 random parent blanks and 50 random youth blanks. Scoring guides for both forms of the ISB were then assembled from those responses which yielded high agreement among the judges. On a test-retest of the Youth Form with a random sample of 50 Ohio students over a two-year interval, the true correlation was between .67 and .88. For a test-retest with Kansas college women over a one-month interval, the true correlation was be-

tween .49 and .80. The Kell-Hoefflin ISB may be used by guidance workers, teachers, youth leaders and others who do informal counseling and can be used with groups, with individuals or members of a family. The monograph contains a manual of instructions and the scoring guides for each form. —Authors' Abstract.

672. HOUSE, BETTY J., & ZEAMAN, DAVID. (Univer. of Conn., Storrs) **Reward and nonreward in the discrimination learning of imbeciles.** *J. comp. physiol. Psychol.*, 1958, **51**, 614-618. 14 imbecile children of unselected diagnosis were trained on a series of 60 different, two-choice, visual object discrimination problems. In an attempt to evaluate the differential effects of reward and nonreward, the first-trial response for half the problems was forced to the positive (rewarded) stimulus, while for the other half, response was forced to the negative (unrewarded) stimulus. Performance after the initial unreinforced trial was stronger than after the reinforced trial. The temporary nature of this facilitation, plus other evidence, led to the interpretation of the result as due to an approach tendency to novel stimuli rather than to the greater associative value of a negative trial. This intrusion of stimulus novelty in discrimination learning is a phenomenon found in monkeys as well as imbeciles. Learning sets were not formed by the imbeciles over the series of problems. Monkeys, under comparable conditions, have been shown by Harlow to form such sets. Some comparisons of types of errors in imbeciles and monkeys suggested that imbeciles make more position-habit errors but less differential-cue errors and response-shift errors in later trials. —Authors' Summary and Conclusions.

673. HOUSE, BETTY J., & ZEAMAN, DAVID. (Univer. of Connecticut, Storrs) **Visual discrimination learning in imbeciles.** *Amer. J. ment. Def.*, 1958, **63**, 447-452. 37 institutionalized children, with MAs from 2-0 to 4-6 and CAs from 6 to 20, were given discrimination training with candy reinforcement. The stimuli and techniques were similar to those used by Harlow with naive monkeys. Only 17 Ss learned the discrimination within ten days. In contrast, all 12 monkeys in Harlow's comparable study learned within two days. It was concluded that retarded children of this MA level are inferior to naive monkeys in learning a color-form object discrimination problem, and are by implication inferior to nonretarded children of this MA level, since studies comparing primates with nonretarded children of this age have shown the children to be equal to or better than monkeys. —From Authors' Summary.

674. HURLEY, JOHN R. (Michigan State Univer.) **Maternal attitudes and children's intelligence.** *J. clin. Psychol.*, 1959, **15**, 291-292. This paper attempts to resolve the inconsistent findings between the Drews and Teahan study (Parental attitudes and academic achievement) and the widely quoted study by Baldwin, Kalhorn, and Breese (Patterns of parent behavior). The Drews and Teahan findings indicated that high achieving children had mothers who were, according to their responses to three abbreviated subscales from Shoben's parent attitude survey, authoritarian and restrictive. The Baldwin et al. studies found that the most highly intelligent children came from families depicted as "Acceptant-Democratic" and "Acceptant-Democratic-Indulgent." The "Autocratic" and "Rejectant" families seemed to produce less intelligent children. Further analyses of the Drews and Teahan study indicated that two of the three maternal attitude variables related more highly to intelligence level than to the children's achievement level. This "second look" at the Drews and Teahan data resolved the apparent conflict and so both studies now agree that "the mothers of the more intelligent groups of children tended to be more accepting and less dominating in child rearing attitudes than mothers of less intelligent children." —A. M. Kaplan.

675. JONES, HAROLD E. (Univer. of Calif., Berkeley) **Consistency and change in early maturity.** *Vita Humana*, 1958, **1**, 43-51. A longitudinal study is described, involving approximately 110 men and women, derived originally from a normal public school population. An intensive program of physical, physiological and psychological measurements, repeated annually or semi-annually from about age 11 to about age 18, is now being supplemented by a series of observations during the fourth decade of life. Illustrative results are given in various areas of measurement, showing

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676. KAPLAN, ARTHUR M., & HAFNER, A. JACK. (Washington Univer. Sch. Med., St. Louis, Mo.) **Manifest anxiety in hospitalized children.** *J. clin. Psychol.*, 1959, 15, 301-302. A comparison of anxiety levels as measured by the Children's Manifest Anxiety Scale was made between surgical and nonsurgical 10-, 11-, and 12-year-old hospitalized children and a control group of children, attending public schools. No significant differences in measured anxiety levels were found between the different groups. The conclusion drawn from the negative findings was that the CMAS may not be a valid measure of situationally induced anxiety. —Authors' Summary.

677. KAUFMAN, MELVIN E. (Univer. of Wisconsin Sch. Med.), & PETERSON, WILLIAM M. **Acquisition of a learning set by normal and mentally retarded children.** *J. comp. physiol. Psychol.*, 1958, 51, 619-621. (1) A comparison was made on the acquisition of an object-quality discrimination learning set between a group of six normal and eight mentally retarded children attending a rural community school. (2) The results indicate normal children exhibit a tendency to make more correct responses than retarded children on 48 object-quality problems. (3) The retarded group exhibits a significantly greater percentage of stimulus-perseveration errors than does the normal group. (4) It is suggested that stimulus perseveration appears to be characteristic of the learning approach of retarded children and not characteristic of the normal group. —Authors' Summary.

678. KEMMLER, LILLY, & HECKHAUSEN, HEINZ. (Univer. of Muenster, Germany) **Mütteransichten über Erziehungsfragen.** (Mother's attitudes toward methods of child rearing.) *Psychol. Rdsch.*, 1959, 10, 83-93. This study investigates the attitudes and expectations of mothers concerning the development of certain forms of behavior in children. 110 mothers of first grade children were asked 21 questions as to the age level at which they would expect or allow a certain form of behavior to occur. The questions were of such a nature as: At what age should a boy be able to dress and undress independently (M 6.5 years, SD 1.6)? At what age should a boy be able to stay at home alone when his parents are gone all day (M 10.1 years, SD 3.3)? When should a child be allowed to handle a pocket knife without supervision (M 11.3 years, SD 3.2)? The age norms are related to comparable information from the Gesell studies. Generally speaking, the findings correspond to those reported by Gesell; discrepancies are indicated. Variations for each of the questions are reported quantitatively and discussed qualitatively. The mothers were also asked to state the personality attributes they valued most in the socialization process of their six-year-old children; obedience, honesty, good school performance, orderliness, willingness to help, and cleanliness ranked highest in that order. The author concludes that the majority of the mothers do not have a conception of the six-year-old child as an independent, developing personality, but sees in the child a receptive educative object that needs to be formed and changed. Among the goals of socialization there is little place for individualistic attributes but great emphasis on subordination, conformity, and sociability. —R. E. Muuss.

679. KING, W. H. (Univer. of London) **An experimental investigation into the relative merits of listening and reading comprehension for boys and girls of primary school age.** *Brit. J. educ. Psychol.*, 1959, 29, 42-49. The scores of primary school children on comprehension tests presented orally and visually were compared. Five different types of material were used. The correlations of the auditory and visual tests with each other and with an intelligence test were of the order 0.8. Differences in the mean scores of boys and girls, between boys and girls on the two methods of presentation, and between boys and girls at five levels of intelligence were examined. There were variations between boys' and girls' results, and between oral and visual presentation; there was a marked tendency for boys to do better than girls on some of the oral tests with practical and scientific content. Passages chosen for similarity of content were not necessarily equivalent to the children. One thing clearly emerges

from this research: a single mark for one comprehension test is not a valid or reliable mark for an assessment of comprehension in general; a number of short passages with variety in content might be a more useful guide. —Author's Summary.

680. KODMAN, FRANK, Jr., POWERS, THEODORE R., PHILIP, P. PHILIP, & WELLER, GEORGE M. (Univer. of Kentucky) **An investigation of hearing loss in mentally retarded children and adults.** Amer. J. ment. Def., 1958, 63, 460-463. From a sample of 208 institutionalized children and adults, 189 were tested individually for pure tone hearing sensitivity. The data were analyzed on the basis of a 30 db hearing loss criterion. The incidence of hearing loss for the total sample was 21%; for the age group 7 to 19 years, the incidence of loss was 19%. The latter represents almost a fourfold increase over the estimate for a group of public school children. Untestable Ss, who constituted 9% of the total sample, had mental ages from 1 to 4 years. It was concluded that PGR audiometry should be substituted for standard pure tone audiometry with these Ss. —From Authors' Summary.

681. KRALOVICH, ANNE MARIE. (North Jersey Training Sch., Totowa, N.J.) **A study of performance differences on the Cattell Infant Intelligence Scale between matched groups of organic and Mongoloid subjects.** J. clin. Psychol., 1959, 15, 198-199. This study investigates the differences in test performance between medically diagnosed brain damaged children and those diagnosed as Mongoloids. Both groups were able to utilize manipulatory movements. Each group contained 28 subjects ranging in age from 5 to 8 years. Children in each group were individually matched for age, sex, and socioeconomic status. There were 12 males and 16 females in each group. The Cattell Infant Intelligence Scale was administered to each child individually. The results failed to reveal any significant differences between the two groups for MA and IQ. The author then utilized the sign test and tested for differences in subtest performance. Only 5 of the 113 subtests showed significant differences between the groups beyond the .05 level of confidence. 6 additional subtests closely approached the .05 level. The author points out "those items which show highly significant differences between the organics and mongoloids comprise motor manipulations which require simultaneous adductive and abductive hand movements." In addition, the organic group had more difficulty with motor items requiring grasping and manipulation of objects. —A. M. Kaplan.

682. LEDOUX, V. **L'avenir de nos enfants, quelques attitudes et opinions des parents d'élèves de l'école primaire publique.** (The future of our children; some attitudes and opinions of parents of students of the public elementary school.) BINOP, 1959, 15, 11-41. The results of several analyses of questionnaires answered by 5139 fathers and 4963 mothers are reported in detail. The vocational aspirations of these parents for their children are in large part determined by their own socioeconomic background and only in a limited way by the children's scholastic performance. —S. G. Vandenberg.

683. LESSER, GERALD S. (Hunter Coll., New York City) **Religion and the defensive responses in children's fantasy.** J. proj. Tech., 1959, 23, 64-68. An adapted version of the TAT was administered to 63 fifth and sixth grade boys from Catholic, Jewish, and Protestant groups to determine the relationship of religious affiliation to fantasy aggression-anxiety responses. Measures of overt and fantasy aggression showed no differences between the religious groups, but there were significant differences in aggression-anxiety responses. Catholic boys used a greater number of aggression-anxiety responses than Jewish or Protestant boys. Aggression-anxiety responses were classified as to whether they prevented, interrupted, or followed aggression; a fourth category was psychological distance. Catholic boys gave a significantly greater number of aggression-anxiety responses that interrupted and followed aggression in fantasy. There were no significant differences in the other categories. —L. E. Harrell.

684. LEVINSON, BORIS M. (Yeshiva Univer., New York City) **Reevaluation of the Revised Stanford-Binet Scale, Form L Vocabulary as a test of intelligence for the kindergarten and primary school child.** J. genet. Psychol., 1958, 93, 237-248.

A study of the revised Stanford-Binet, Form L records of 640 native and 136 foreign born children, aged 4 to 9-11, indicated that there is a statistically significant difference between the vocabulary MA for the same Binet MA in favor of native born children. The mean vocabulary MA overestimates the full scale MA for native born children, and underestimates the full scale MA for foreign born children. Since the test was published there seems to have been a change in the order of difficulty of the vocabulary words. However, the relative difficulty of the words remained about the same for the native and foreign born groups. It is suggested that an examiner should continue administering vocabulary words until at least 10 consecutive failures. While the Binet vocabulary is still a valid index of intelligence on the kindergarten and primary school level, as indicated by correlation with the entire scale, its use alone as a short verbal scale of intelligence is not advisable. —From Author's Summary.

685. LEWIS, D. G. (Queen's Univer., Belfast) **Bilingualism and nonverbal intelligence: a further study of test results.** Brit. J. educ. Psychol., 1959, **29**, 17-22. Previous investigations of the effect of (English-Welsh) bilingualism on performance in non-verbal tests of intelligence have not yielded a consistent pattern of results. In the present study a nonverbal test was given to ten-year-old pupils from primary schools in Wales. Linguistic background was assessed by means of a language questionnaire, the assessment being compared with teachers' ratings. Care was taken to select a homogeneous group of a thoroughly Welsh background (i.e., a bilingual group) together with a corresponding English-speaking group (with a background of no appreciable "Welshness"). The test results showed a statistically significant difference, in favor of the monoglots, corresponding to about 8 points of IQ. It is suggested that this difference may be due, in part, to (a) the test being a timed one, and (b) the groups not being equal with respect to urban-rural differences. Again the "verbal residue" of a nonverbal test might well be a nonnegligible factor in measuring the intelligence of the bilingual child. —Author's Summary.

686. LEZINE, IRÈNE. (Centre Nat. de la Recherche Scientifique, Paris) **Le développement psychomoteur des jeunes prématurés.** Études Néo-Natales, 1958, **7**, 1-50. The literature on the mental and physical development of prematurely born children is surveyed. It is suggested that the variation in results among studies may often be attributed to socioeconomic differences among samples and by the lack of control groups. The present study reports data on 127 premature infants born at the Maternité de l'hôpital Baudelocque and a control group of 122 full term children. These groups were followed from early infancy through 2-4 years. In addition to receiving regular physical examinations, the children were tested with the Brunet-Lezine scale, and observed in free play situations. The mothers were interviewed about behavior items such as feeding, sleep, toilet-training, etc. Data for the premature group are reported separately for infants born at 6, 7, and 8 months gestational age. The mean weights for all three groups remain below those of the control group throughout the first postnatal year. The mean IQ of the three subgroups is somewhat lower than that of the controls at 12 months. When premature infants of similar birthweight are compared, it is found that the mean IQ at one year is higher for the less premature. These findings are interpreted to mean that prematurity has a greater influence on psychomotor development than does birth weight. When the chronological age divisor is corrected for degree of prematurity, the difference in IQ between the control group and infants born at 7 or 8 months is very slight. By three years the differences between children born at 7 to 8 months and the controls has disappeared. The group of prematures born at 6 months still shows some retardation —D. H. Eichorn.

687. LONG, E. R., HAMMACK, J. T., MAY, F., & CAMPBELL, B. J. (Univer. of N. C.) **Intermittent reinforcement of operant behavior in children.** J. exp. anal. Behav., 1958, **1**, 315-339. Children varying in age from 4 to 8 years operated telegraph key or Lindsley manipulanda in individual experimental cubicles. They were reinforced intermittently with trinkets, pennies, and projected pictures. Experimental sessions were 20 to 30 minutes and usually occurred once each week. The schedules of reinforcement used were fixed ratios, fixed intervals, and variable intervals. Approximately 200 children participated in this research, many returning for more than

20 sessions. Almost all of the data attested to the feasibility of controlling the behavior of children by means of various schedules of reinforcement. —Authors' Summary.

688. MAXWELL, A. E. (Maudsley Hosp., Univer. of London) **Tables to facilitate the comparison of sub-test scores on the WISC.** *J. clin. Psychol.*, 1959, **15**, 293-295. Tables are provided giving the values which the differences between pairs of subtests of the WISC, or pairs of means of subgroups of subtests, must attain or exceed to be significant at the 5% level and the 1% level of significance. —Author's Summary.

689. NITSCHKE, CARL J., & THOM, WILLIAM. (Childrens Service Center, Wilkes-Barre, Pa.) **Children's like and dislike drawings.** *J. proj. Tech.*, 1959, **23**, 72. The hypothesis that "freely chosen Likes and Dislikes in children's drawings would offer greater insights into their school adjustment, than would requests to draw specifics" was tested. The total sample consisted of 76 boys and 64 girls from all six grades of an elementary school. Age ranged from 5-11 years to 13-6 years, and IQ from 80 to 136. Each S was asked to draw something he liked and something he disliked. Estimates of school adjustment were obtained from teachers' ratings. Drawings were scored for time taken to begin drawing, drawing time, number of concepts, number of colors, and area covered by drawing. Correlations between drawings, Likes and Dislikes, and school adjustment were not significant, except for four correlations at the second grade which "appeared to reflect the stress placed on drawing by that teacher, rather than general factors." The only significant difference between Likes and Dislikes was in drawing time. —L. E. Harrell.

690. OLUM, VIVIAN. (Cornell Univer., Ithaca, N. Y.) **Developmental differences in the perception of causality under conditions of specific instructions.** *Vita Humana*, 1958, **1**, 191-203. Differences between adults and children in the perception of causality under conditions of specific instructions were studied using the Michotte technique. Three disks of varying speed relations were presented to 34 children (averaging 6½ years of age) and 34 adults. Each subject was asked whether he saw one object shove or tag the other. Significant differences were found between adults and children on a disk representing a speed ratio of 1:30, with children giving a greater number of shove (lancement) responses than adults, confirming the initial hypothesis that in any integration-segregation perceptual continuum children more often than adults will be found on the integrated side. A comparison of this situation with a previously reported uninstructed situation shows significant differences between the two situations, both for adults and for children, in terms of more segregated responses in the instructed situation. It is suggested that the instructions tend to break down the total configuration by directing the subjects to look for part aspects of it. —Author's Summary.

691. RHEINGOLD, HARRIET L., GEWIRTZ, JACOB L., & ROSS, HELEN W. (Nat'l. Inst. Mental Health, Bethesda, Md.) **Social conditioning of vocalizations in the infant.** *J. comp. physiol. Psychol.*, 1959, **52**, 68-73. Infants often vocalize as part of the response they give to the appearance of an adult. The central question of this study is: Can the frequency of vocalizing be increased if the adult makes a social response contingent upon it? The Ss were 21 normal infants, three months of age, living in an institution. 11 of them were studied in Experiment I with one E; 10 different Ss and 1 S from Experiment I were studied in Experiment II with a different E. During the first and second Baseline days E leaned over S with an expressionless face, and the number of vocalizations was tallied. During the next two days, the first and second Conditioning days, E reinforced vocalizations by simultaneously smiling, clucking, and touching S's abdomen. During the last two days, the first and second Extinction days, E returned to Baseline conditions. The results indicated that: (a) there was no difference between Experiments, (b) Conditioning raised the rate of vocalizing above the Baseline level, (c) while Extinction lowered it until it approached the Baseline level. The results suggest that the social vocalizing of infants and, more generally, their social responsiveness may be modified by the responses adults make to them. —Authors' Summary.

692. SARNOFF, IRVING, SARASON, SEYMOUR B., LIGHTHALL, FREDERICK F., & DAVIDSON, KENNETH S. (Yale Univer.) **Test anxiety and the "eleven-plus" examinations.** *Brit. J. educ. Psychol.*, 1959, 29, 9-16. After a brief review of . . . previous work in the area under investigation, the results of two studies which bear upon the validity of the Test Anxiety Scale (TA) are reported. Both studies involved the 11+ examinations. In the first study it was predicted that TA scores would increase as children moved closer in time to the 11+ examinations. In the second study it was predicted that there would be a small but statistically significant negative correlation between TA scores and performance on the 11+ examinations. The obtained results failed to confirm either of these predictions. Drawing upon other empirical data which have been gathered as part of a research programme on the correlates of anxiety, several alternative interpretations of the findings are advanced. —Authors' Summary.
693. SCHLANGER, BERNARD B. (West Virginia Univer.) **Results of varying presentations to brain-damaged children of an auditory word discrimination test.** *Amer. J. ment. Def.*, 1958, 63, 464-468. The purpose of this study was to evaluate the ability of brain-injured children to differentiate figure and ground in auditory perception. 24 children, mentally retarded because of brain defect, were the subjects. Their mean CA was 10.1 years, and their mean MA was 4 years. The children were tested to ascertain their ability to withstand the attraction of extraneous background stimuli while participating in a simple choice technique test of auditory word discriminations. Two series of presentations, one live and the other recorded, were varied in terms of three types of background sound: normal room noise, continuous background of 15 different sounds, and music. The varying backgrounds did not affect word choice, but a significant difference was found between types of presentation, with higher mean scores for the live presentation in all types of background. The product-moment correlation between the total scores of the six tests and MA was +.59. It was concluded that faulty auditory perception was a result of disturbed behavior as sequelae of cortical lesion, rather than a general or specific auditory factor. —J. W. Fleming.
694. STEVENSON, HAROLD W., & McBEE, GEORGE. (Univer. of Texas, Austin) **The learning of object and pattern discriminations by children.** *J. comp. physiol. Psychol.*, 1958, 51, 752-754. Groups of children of CA 4 and 6 were presented with stereometric and planometric object and pattern discrimination. The largest, smallest, and middle-sized stimulus within each set was correct for different Ss. The Ss learned to discriminate the stereometric objects for rapidly than the planometric objects and patterns. The middle-sized stimulus was the most difficult to discriminate for the younger Ss and for older Ss trained on the pattern discrimination. —Authors' Summary.
695. STEVENSON, HAROLD W., & SWARTZ, JON D. (Univer. of Texas, Austin) **Learning set in children as a function of intellectual level.** *J. comp. physiol. Psychol.*, 1958, 51, 755-757. Three groups of 10 Ss representing two levels of feeble-mindedness and one normal level were presented with a maximum of 24 object-discrimination problems. Meeting a criterion for learning set were 10 normal Ss, 8 high feeble-minded Ss, and 1 low feeble-minded S. A decrease in trials required to solve successive problems was found for all groups, but only the normal and high feeble-minded Ss showed a significant increase in frequency of correct response on Trial 2 of each problem. —Authors' Summary.
696. STOLTZ, ROBERT E. (Southern Methodist Univer.), & SMITH, MARSHALL D. **Some effects of socio-economic, age and sex factors on children's responses to the Rosenzweig Picture-Frustration Study.** *J. clin. Psychol.*, 1959, 15, 200-203. The Children's Form of the Rosenzweig Picture-Frustration Study was administered to 167 elementary school students. The Ss were grouped into 12 subgroups representing the possible combinations of three age levels, sex, and upper or lower socioeconomic level. The 24 situations depicted in the test were divided into adult-child and child-child situations according to the stimulus elements in each of

the 24 situations. The effects of sex, age level, and socioeconomic level on the responses produced in each of the two types of situations was determined. Significant effects of age level, socioeconomic level and situation components were found. No significant sex effects were obtained. —Authors' Summary.

697. STOTT, LELAND H. (Merrill-Palmer Sch., Detroit, Mich.) **The nature and development of social behavior.** Merrill-Palmer Quart., 1958, 4, 62-78. The author is concerned with the importance of the physical organism in relation to the patterning and "structure" of personality. Three main aspects of development—growth, maturation, and learning—are differentiated. According to this frame of reference, personality is the total expression of the constitutional nature of the individual. Using check list ratings of 60 four-year-olds in terms of 100 items of social interaction, the investigator analyzed seven social-behavior types of children: (1) timid, withdrawing, (2) easy-going, socially secure. (3) natural leader, (4) warm and friendly, (5) officious, bossy, (6) disagreeable, socially ineffective, and (7) lone wolf by choice. 36 of the subjects fell into these groups. When longitudinal records of these 36 children were studied, it was found that in every case the pattern was clearly in evidence when the child entered the nursery school and continued to be characteristic of him throughout his contact with the Merrill-Palmer School. —G. E. Chittenden.

698. ULICH, EBERHARD. (Univer. of Munich, Germany) **Über die Beschäftigungen jugendlicher Schüler in der Freizeit.** (Concerning the leisure time activities of adolescent pupils.) Psychol. Rdsch., 1959, 10, 180-190. This research study was conducted in view of the widely discussed and somewhat controversial introduction of a five day school week in Germany. The question under investigation is the extent pupils are or would be capable of meaningful leisure time activities. This study reports the findings obtained from a group of 456 secondary school pupils, age 10 to 19, who participated in a five day school week program. Data were gathered through interviews with the mothers of the pupils. No attempt was made to validate the data by asking the pupils directly. Reported in percentages are the following aspects of leisure time activity: (1) pupils' activities on Saturday morning; (2) preferred leisure time activities in general; (3) hobbies, reported in total and for three age groups separately; (4) preferred leisure time activity of father as reported by mother. The findings are interpreted as supporting the five day school week and as indicating a justified need for leisure time. 81% of the mothers felt that their children were capable of meaningful activities during their free time. Developmental trends concerning preferred hobbies are discussed. Data are related to and seem to be in agreement with other investigations dealing with elementary school pupils. —R. E. Muuss.

699. WINTHOP, HENRY. (Univer. of Wichita, Kansas) **Discovery of the gifted child.** Bull. Menninger Clinic, 1959, 23, 85-96. The intent to discover individuals of unusual intellectual ability and to interest them in science and mathematics has recently been very marked. This paper deals with methods of detecting them in children as early as possible (around the beginning of schooling). Six different methods, more recently developed than the generally used intelligence, aptitude, and achievement tests, or in the process of development, are discussed for use in early detection of the gifted. They are: the psi apparatus (showing logical relationships of conjunction, disjunction, negation and implication, in ages 6 to 10); the cuisenaire technique (a method of teaching mathematics by starting with algebra rather than arithmetic); problem materials which involve measurable data processing (the game "21 Questions" is a rough example); observation of the child's inventiveness, originality, and interest (a check list of the games, interests, and traits of the child was developed by Scheifele); applications of game theory (inventory not yet constructed); and, finally, themes assigned to children aimed at tapping various types of intellectual integration. —E. N. Plank.

700. WOODWARD, MARY. (Fountain Hosp., London) **The behaviour of idiots interpreted by Piaget's theory of sensori-motor development.** Brit. J. educ. Psychol., 1959, 29, 60-71. The developmental sequence of sensory-motor behavior as described by Piaget is appraised in relation to the development of 147 severely mentally

defective children in a hospital setting. Two age groups, 7 to 9 years and 14 to 16 years, were observed for mannerisms and manipulation of play material according to Piaget's sequences for sensory-motor intelligence and for object concept development. The results showed that the order of development of sensory-motor responses in the severely mentally defective correspond closely to the order of development demonstrated by normal children. Suggestions for extension of the research to other handicapped groups are made. —W. D. Smith.

701. ZEAMAN, DAVID, HOUSE, BETTY J., & ORLANDO, ROBERT. (Univer. of Connecticut, Storrs) **Use of special training conditions in visual discrimination learning with imbeciles.** Amer. J. ment. Def., 1958, 63, 453-459. Three experiments in visual discrimination learning are described, employing from eight to 26 trainable imbecile children. Most Ss, with MAs between 2 and 6, had previously failed to learn a color-form discrimination problem. Ability to name the positive and negative cues was related to ease of learning, but a direct test of whether verbal labels mediated learning could not be carried out because of the excess time it takes to teach color names to such Ss. The introduction of novel stimuli, either positive or negative, facilitated learning, indicating that familiarity and novelty are discriminable aspects of stimuli. Further evidence was presented to show that failure of discrimination was not simply because the Ss lacked the "idea of the game." —J. W. Fleming.

PSYCHIATRY AND MENTAL HEALTH

702. ABRAHAMSEN, DAVID. (New York State Dept. Mental Hygiene) **Mental hygiene services in private schools.** Ment. Hyg., 1959, 43, 281-289. Based on 380 sets of questionnaires from selected private schools in each of the 48 states, findings dealing with mental hygiene services are compared with similar earlier data from public schools. Private schools reported relatively more emotionally disturbed children (11.7%) than did public schools (10%). However, mental hygiene problems were discussed in the classroom in 43% of the private schools but in only 20% of the public schools. On the average, the private schools reported that 66.6% of their need for mental hygiene staff was met, while public schools reported this need as 18.4% met. 36% of the private schools had no mental hygiene services for emotionally disturbed children while 17% of the public schools had none. The author detailed the meaning of these findings indicating important implications for the most desirable working relationships between educators and psychiatrists. —R. L. Witherspoon.

703. BERMAN, HAROLD H., ALBERT-GASOREK, KATHRYN ELEANOR, & REISS, MAX. (Willowbrook State Sch., Staten Island, N.Y.) **Gonadal immaturity as an etiological factor in some forms of mental deficiency, and its therapy.** Dis. Nerv. System, 1959, 106-110. (Monogr. Suppl.) The authors describe results of their treatment with chorionic gonadotrophin in 32 boys selected from a larger group of hospitalized mentally defective boys between the ages of nine and sixteen. In this group very few showed normal gonadal development; secondary sex characteristics were deficient as well. The boys were pale, undersized and underweight. They were shy, withdrawn, and were afraid of examination but did not protest. The patients were started on chorionic gonadotrophin in varying dosages from 100 units a day to 1500 and, in some cases, 2000 units a day. In most cases treatment caused the inguinal canal to close and increased the size of the testicle so as to make its retraction impossible. During the first two months, the boys grew in height by an average of 1½ inches. After three months, they had gained at least 2 inches. This phenomenon was observed without exception. The most intriguing change observed was one in facial expression; the facial stigmata of the dullard nearly disappeared. Another notable feature was marked alteration of the mental status, with more social behavior resulting in improved accessibility, cooperativeness, and teachability so that the patients became amenable to psychotherapy, school instruction and vocational training. The range of intelligence (revised Stanford-Binet) in the treated group and a control (un-

treated) group was from idiot to borderline and, in terms of pre-treatment IQ, the groups were statistically comparable. The average change in IQ following approximately three months treatment for the treated group was 7.0 points with a standard deviation of 5.1, while average change for the untreated group was 1.9 with a standard deviation of 3.6. On Bender Gestalt drawings, impressive changes were seen in many of the treated patients. In many cases, the size of the drawings definitely increased. Analysis of the Human Figure and other non-copied drawings, while not complete, revealed the same trend toward increase in size of the drawings. The authors conclude that in a limited group of mentally defective boys where sexual retardation is one of the predominant concomitant features, its repair produces a change of personality and emotions. . . . —(Dig. Neurol. Psychiat., 27).

704. BOWER, B. D. (Univer. of Birmingham, England), & **JEAVONS, P. M.** **Infantile spasms and hypsarrhythmia.** *Lancet*, 1959, 1, 605-609. The authors use the term "infantile spasms" to describe all varieties of this rare type of epilepsy which usually starts at about 6 months of age. The grossly abnormal and characteristically chaotic EEG pattern commonly found in patients with infantile spasms is now usually known as hypsarrhythmia (Gibbs and Gibbs, 1952). While the typical appearance, described by these workers, poses no problem, the authors have had difficulty in classifying less typical appearances. They have, therefore, analyzed the EEGs of their patients, using a scoring system designated to separate the characteristics of hypsarrhythmia from those of non-hypsarrhythmic epilepsy. By this means they have tried to establish the degree of correlation between hypsarrhythmia and infantile spasms. The clinical features of 22 patients with infantile spasms are described. The spasm is generalized, rapid, and brief, and may be flexor or extensor. It may be followed by a cry, and is often repeated to form a series. It is generally agreed that severe mental deficiency is a common accompaniment of the spasms, often developing suddenly and simultaneously with their onset. In about half the cases there is a history of prenatal or perinatal cerebral damage, and in these cases mental development is usually retarded from birth. Physical abnormalities may be found in this group. In the other half the etiology is unknown, and in these children mental development is usually normal up to the time of the first spasm. Anticonvulsants do not usually inhibit infantile spasms, but chlortetracycline may temporarily do so. It is generally agreed that most patients remain mentally defective although the spasms diminish in frequency or disappear. A few die within a few years of the onset of spasms. In patients with infantile spasms the EEG is almost always abnormal, but definite hypsarrhythmia is found in only half of the first records. By contrast, more than half the patients with epilepsy (not infantile spasms) in the same age-group have a normal EEG, and a hypsarrhythmic record is rare. Although a non-hypsarrhythmic, epileptic record may be found in patients with infantile spasms, EEG examination of suspected cases is very useful, for a normal record is strongly against the diagnosis, while a hypsarrhythmic one is very much in favor of it. No correlation was found between the presence of hypsarrhythmia and the type of spasm (i.e., whether flexor or extensor) or the degree of mental defect. Brain damage at or before birth was more frequently associated with an epileptic record than a hypsarrhythmic one. —(Dig. Neurol. Psychiat., 27).

705. KATILA, O., & LAPPALAINEN, A. (Kiveliä Hosp., Helsinki) **Observations concerning enuretics treated in a children's neurologico-psychiatric department.** *Ann. paediat. Fenniae*, 1958, 4, 112-118. The writers present a series of 72 patients with enuresis, collected from a children's neurologico-psychiatric department during the 5-year period 1950-1955. During this period a total of 268 children were treated in the department for various reasons. The type of department in question has naturally influenced the type of cases in the present series. Enuresis is frequently divided into so-called essential enuresis and that due to emotional disturbances. In this series enuresis was naturally due to emotional disorders in a large proportion of the cases, although a differential diagnosis is extremely difficult. In our series, notice is drawn to a great predominance of boys, there being 53 boys and 19 girls. Noteworthy in the age distribution are the incidence peaks at 5 and 7 years. In the development of a child

the age of 5 is regarded as the so-called sexual phase, and at the age of 7 the Finnish child enters school. The high incidence of primary enuresis is conspicuous, although in this series a large number of secondary enuretics could have been expected. Possibly the high incidence of primary enuretics points to constitutional weakness. In well over one-half of the cases, i.e., in 38 cases, the enuretic was his parents' first child, being also the only child in 14 cases. The social conditions were extremely poor in many cases, and one or both of the parents were alcoholics in a large proportion of cases. Most families were living in a single room. Somatic examinations revealed one notable uniform feature. The greater proportion of the children were of normal intelligence level. Oligophrenics—who usually are not enuretics—were not found in this series. In the light of a follow-up inquiry the ultimate results of treatment appeared to have been rather poor, and the help received from hospital treatment was in most cases temporary only. This is illustrated by the fact, for example, that some of the children who were dismissed as cured were later reported to suffer again from enuresis. —Discussion and Summary.

706. KENNARD, MARGARET A. (Fort Steilacoon, Wash.) **The characteristics of thought disturbances as related to electroencephalographic findings in children and adolescents.** *Amer. J. Psychiat.*, 1959, 115, 911-921. This report is based on a multidisciplinary, longitudinal study of factors underlying disorders of behavior. It involves a series of 200 children and adolescents from 7 to 16 years of age, admitted to a mental hospital during the past two years. One problem considered is that of the differential diagnosis between the thinking disorders due to psychogenic factors and those resulting from the structural cortical defects of brain injuries. "Thought disturbances" designated those patients with true schizophrenic symptoms; those characteristics which might be called clinically prepsychotic or schizoid were labelled "query thought disturbances." There were four diagnostic categories: Thought disturbance, thought disturbance with organic component, non-thought disturbance, and non-thought disturbance with organic component. None of the data obtained from either EEG or neurophysiological examination were used to place an individual in one of these four categories. Because of equivocal findings and difficulties in assigning etiological factors to behavioral syndromes as differentiated by history or by psychological pattern, a comparison was made of the EEG findings and the diagnostic categories in an effort to discover whether a more accurate differentiation can actually be made between disorders of behavior resulting from psychogenic factors and those which related to structural brain injury through the aid of EEG. The data presented confirm many observations which have been made previously. There is not, however, any evidence that the EEG by itself may be used as a clear-cut diagnostic tool for differentiation between the organic disorders of behavior and those of more completely psychogenic origin. However, a diagnosis of organic brain disorder as obtained by evidence from the clinical history and behavior pattern has a strong positive correlation with EEG abnormality (83%). This, of course, is to be expected since known structural defects of the brain have always been discernible by EEG. In the present cases, however, since the disorders were primarily behavioral, and in most instances without organic neurological signs, the high incidence of EEG abnormality is of interest. Thought disturbances, as defined above, when occurring in children with no sign of organic brain disturbance, showed 40% of EEG abnormality as compared to 23% abnormality among children with non-organic, non-thought disturbance syndromes. The EEG abnormality among children with thought disturbances has further been shown to be one of dysrhythmia and instability. This is the result of multiple frequencies occurring during a single recording and from a single area. Theta and beta wave rates as well as irregular frequencies within the alpha band can be seen on frequency analysis. Thus a multiple frequency pattern here replaces the more stable normal single alpha frequency. —(*Dig. Neurol. Psychiat.*, 27).

707. KITSUE, JOHN J., & DIETRICK, DAVID C. **Delinquent boys: A critique.** *Amer. sociol. Rev.*, 1959, 24, 208-215. Cohen's "Delinquent Boys: The Culture of the Gang" (Free Press, 1955) is critically examined as a substantive theory of the "delinquent subculture" and as a contribution to a general theory of delinquency.

Three major criticisms are offered of the theory of delinquent subculture: (1) The social and cultural bases of the "working-class boy's problem" are ambiguous and subject to equally plausible alternative interpretations. (2) The working-class boy's ambivalence toward the middle-class system does not provide the psychological conditions which would warrant the introduction of the concept of reaction-formation. (3) The reaction-formation thesis raises the question of the independence between the description of the delinquent subculture and the theory which proposes to explain it. Cohen's theory as stated presents added problems of theory and method which render either a direct or indirect test of the theory impossible. The theory of the delinquent subculture is discussed in relation to the value-transmission theories of delinquency, and Cohen's propositions are reformulated to provide hypotheses for an empirical test of his theory. —A. Montagu.

708. KODMAN, F., Jr., et al. (Univer. of Kentucky, Lexington) **Some implications of hearing defective juvenile delinquents.** *Except. Child.*, 1958, 25, 54. The major purpose of this study was to compare the incidence of hearing loss in juvenile delinquents with public school children. 18% of the delinquents had a 30 db or greater hearing loss, more than twice that found in a comparison sample of public school children. 12 of the 55 cases in the 30 db hearing loss group gave evidence of a nonorganic hearing loss. Within the delinquent sample, age, sex, and race were not significantly related to hearing loss. —From Authors' Summary.

709. OETTINGER, LEON. (Univer. of Southern Calif. Med. Sch.) **The use of deanol in the treatment of disorders of behavior in children.** *J. Pediat.*, 1958, 53, 671-675. Deanol, a new drug, was used in the treatment of disorders of behavior in 108 nonepileptic and 17 epileptic children. In 68% of the nonepileptic group, this agent proved beneficial in that the children came to act in more socially accepted patterns and learning in school improved. In the epileptic group it was not as beneficial as amphetamine and related drugs. No toxicity or significant side effects were seen at daily doses up to 200 mg. —Author's Summary.

710. PRINGLE, M. L. KELLMER (Univer. of Birmingham, England), & **BOSSIO, VICTORIA.** **A study of deprived children. I. Intellectual, emotional and social development.** *Vita Humana*, 1958, 1, 65-92. This investigation had two main aims: firstly, to study the development and achievement of deprived children comparing them with those of the ordinary school population. In addition to the aspects reported here, language development and reading attainment were assessed. The second aim was to test three hypotheses regarding the results of deprivation: that its ill-effects are more marked (1) where the first separation from the mother occurred at an early age; (2) where separation has lasted for a long time; and (3) where deprivation has been complete. Altogether 188 institutionalized children were studied at three age levels, 8, 11 and 14 years of age. The majority of this sample of deprived children was of average ability. However, the proportion of dull children was considerably higher, and that of bright considerably lower, than among school children generally. The incidence of emotional maladjustment was high, supporting previous research evidence. Both quantitative and qualitative differences were found between the institutionalized and ordinary children. Only with regard to social development did the achievement of the deprived equal that of children living with their own family. However, there is evidence to suggest that an apparently satisfactory level of social competence may be produced by the very circumstance of living in an institutional environment. Regarding the three criteria of deprivation, it was found that early first separation from the mother resulted in significantly greater ill-effects on the children's development. Similarly, complete deprivation had a significantly deleterious effect. On the other hand, sheer length of institutionalization did not appear to be of great importance. —Authors' Summary.

711. PRINGLE, M. L. KELLMER (Univer. of Birmingham, England), & **BOSSIO, VICTORIA.** **A study of deprived children. II. Language development and reading attainment.** *Vita Humana*, 1958, 1, 142-170. The hypothesis that deprived children are markedly backward in language development, is supported by our findings. More-

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over, the extent of this backwardness was larger than that found in any other aspect of development and achievement. Thus it seems that the effect of deprivation tends to be most detrimental to a child's language development. It is likely, therefore, that assessing the intelligence of deprived children by predominantly verbal tests inevitably results in an underestimate. This view is supported by our findings on the WISC on which all three age groups obtained significantly higher scores on the Performance Scale. With regard to the three criteria of deprivation, early first separation and subsequent complete deprivation had a significantly deleterious effect. Sheer length of institutional residence did not result in differences of language development. A serious degree of backwardness in comprehension reading was also found. The incidence of backwardness and retardation in this subject was at least twice as high among our sample than in the ordinary school population. Once again, early first separation and lack of continued contact with the family appeared to have an adverse (though probably indirect) influence on later achievement in reading. In the discussion of all the results, two aspects are stressed: the multiplicity of adverse interacting circumstances which affect the lives of children who eventually come into care; and the vicious circle in which they seem caught as a result of this fact: thus impoverished and often unhappy home conditions lead to backwardness in language development and to emotional maladjustment which in turn result in unsatisfactory school adjustment, discouragement and hence further lack of progress. Finally the practical implications of our findings are considered together with some suggestions for both prevention and treatment. —Authors' Summary.

712. SIFNEOS, PETER E. (Massachusetts General Hosp., Boston) **Preventive psychiatric work with mothers.** *Ment. Hyg.*, 1959, 43, 230-236. While not reported as a research study in the usual sense, the observations, supported by three case presentations, are worthy of attention. A brief report is made of the "psychiatric work with 50 mothers who had disturbed relationships with their children at a critical time in the child's emotional development." The report covers a two-year period and describes the program of psychiatric work with mothers of children with emotional problems at the Human Relations Service of Wellesley, Massachusetts. —R. L. Witherspoon.

713. WHITE, JOHN GRAHAM. (Univer. of Liverpool, England) **The use of learning theory in the psychological treatment of children.** *J. clin. Psychol.*, 1959, 15, 227-229. The author presents a case study to demonstrate the applicability of general psychological theory to treatment procedures. In addition, he states that "some forms of disordered behavior in children can be explained and treated according to well-established principles of learning, without any recourse to 'psychodynamic' concepts and without any attempt to produce 'insight' in the patient by means of verbal 'interpretations' of behavior." The case described is that of a 5½-year-old girl admitted to the hospital because of her refusal to eat and complaints of rheumatic pains. This child felt very close to her father and to a great extent controlled him. The father became ill and died in the home. The feeding disorder became acute at that time. In order to revive appetite a simple conditioning method was devised. A father-substitute served as the conditioned stimulus and reinforcement was supplied by hunger satisfaction and anxiety reduction by means of sitting on the "father's" knee and being fed by him. Both stimulus-substitution and generalization were utilized. The psychologist replaced the father and this was later generalized to the child's own family members. No interpretations were given to the child. Six months after her initial referral eating was no longer of any concern to her family and two uncles were able to serve as father-substitutes. The child has remained free of her symptoms for three years now. She is reportedly "healthy and fairly well-adjusted at home, at school, and with her play friends." —A. M. Kaplan.

714. WOODWARD, JOAN. (Birmingham Accident Hosp., England) **Emotional disturbances of burned children.** *Brit. med. J.*, 1959, 1, 1009-1013. The present study was based on 198 children aged under 15 years who sustained burns of 10% or more surface area and who were in-patients during 1952-1955. The mothers of these children were asked to give an opinion about the emotional state of their child

before the accident and at the time of the investigation (1957-1958). Similar investigations were made on the 608 siblings of the patients. A further independent control group of 50 children were selected at random from the same districts in the city as the patients. The purpose of the investigation was to try to find out (a) whether emotional disturbance really existed in the burned children, and if it preceded or followed the accident; (b) if it did exist, the forms it took; and (c) whether disturbance was related to any particular factors involved in the accident or hospitalization. The mother's opinion was chosen as the main criterion of disturbance; however, estimates by the investigator were also made. Of the 198 cases investigated, 81% showed signs of emotional disturbance according to their mothers. Of this 81%, 26% had severe disturbances, 41% had moderate disturbances, and 14% had slight disturbances. Fears and anxieties were the most common symptoms. Of the psychosomatic disorders, feeding difficulties, sleep disorders, and bedwetting were the outstanding problems. This high incidence of disturbance (81%) was in marked contrast to that noted in the patients' 608 siblings (7%) and in the random control group of 50 (14%). Of many factors examined, only the lack of parental visiting to children under five years of age was found to be significantly related to disturbance. . . . —(Dig. Neurol. Psychiat., 27).

715. ZIMMERMAN, FREDERIC T. (11 East 68th Street, New York City), & BURGEMEISTER, BESSIE. **A controlled experiment of glutamic acid therapy.** Arch. Neurol. Psychiat., 1959, 81, 639-648. To compare the action of glutamic acid and reserpine in producing intellectual and behavioral changes during the first six months of therapy, a selected (experimental) group of 150 children was given glutamic acid. Children were matched by pairs for age, sex and intelligence quotient at the beginning of therapy with a corresponding (control) group of 150 children given reserpine. A second control group of 50 matched cases received a placebo, making a total of 350 subjects, ranging in age from 4 to 15 years. Pretreatment intelligence quotients showed averages of 59.13, 61.01 and 61.00 for the glutamic acid, reserpine and placebo control groups respectively. The authors started with an original dose of 2½ to 5 grains of glutamic acid daily, gradually increasing this amount every few weeks up to an effective dose as based on clinical evidence. The same general technique was used with reserpine; an average of 0.75 mg. daily was administered, with an individual range from 0.2 to 1.75 mg., in three divided doses. For the glutamic acid group the average verbal intelligence quotient showed a significant point rise (5.49) following six months of treatment, while the reserpine and placebo groups showed only a small rise. Neither the drugs nor placebo was successful in raising performance scores beyond the realm of chance error. Improvement rates of 64% and 57% were given to the glutamic acid and reserpine groups on behavioral traits at the end of treatment, using the observational method as a criterion. When children were out of contact and confused at the beginning of therapy, better clinical results were obtained with reserpine. When they were shy, withdrawn and quiet, or slow, unresponsive and depressed, glutamic acid was more effective. In cases classified as anxious, tense and insecure or irritable, negativistic and hyperactive, reserpine was the drug of choice, although glutamic acid gave results in a number of instances. Results supported the hypothesis that glutamic acid has an activating action and reserpine a more calming effect. . . . —(Dig. Neurol. Psychiat., 27).

PUBLIC HEALTH AND HYGIENE

716. ABAD-GOMEZ, HECTOR (State Health Dept., Antioquia, Colombia), PIEDRAHITA, FRANCISCO, SOLORZANO, RODRIGO, COLOMBIA, MEDELIN, & MARTINS DA SILVA, MAURICIO. **Communitywide vaccination program with attenuated poliovirus in Andes, Colombia.** J. Amer. med. Ass., 1959, 170, 906-913. An outbreak of paralytic poliomyelitis occurred in southern Antioquia, Colombia, in January, 1958. A census located 2922 families who agreed to participate in a program of vaccination, and the immune status of the population was ascertained

by systematic blood sampling. Oral vaccination with attenuated strains of poliovirus (types 1, 2, and 3) began in May, 1958. Comparison of prevaccination and postvaccination serums showed that, of the vaccinated children who lacked demonstrable antibody at the time of vaccination, 91% responded to type 1 virus, 72% to type 2, and 87% to type 3. Both the safety and the immunizing efficacy of the three strains of virus were convincingly demonstrated. —Journal Summary.

717. COLASUONNO, THOMAS M. (Oregon State Board of Health) **Preschool vision screening study in Douglas County, Oregon.** *Sight-Saving Rev.*, 1958, **28**, 156-162. A population of 610 preschool youngsters participated in the study to determine feasibility of mass screening and incidence of eye muscle imbalance in 3- to 5-year-olds. Four vision screening methods were utilized: Snellen; cover test; pupillary reflection, and inspection. With capable personnel employing these accepted screening devices, the following points were determined: (1) Visual acuity can be determined readily and accurately on nearly all 4-year-olds. (2) Mass visual acuity testing of 3-year-olds would probably be inadvisable because of their social, psychological and physiological non-readiness. (3) Screening methods other than Snellen are applicable to most children age 3 and above. (4) About 3% of this population have varying degrees of eye muscle imbalance. (5) Complete vision screening is obtainable with more confidence and satisfactory results if all above tests are utilized. (6) For 98% of the group the study provided their first vision screening or eye examination. (7) Vision defects in children under 4 can be detected by use of these multiple vision screening methods. —Author's Summary.

718. CUNNINGHAM, FLORENCE. (Nat. Soc. Prevention Blindness, New York City) **Preschool vision screening.** *Amer. J. publ. Hlth*, 1959, **49**, 762-765. Vision screening of preschool children is a relatively new procedure in public health. The two primary objectives of such screening are the detection of major refractive errors and of suppression amblyopia. "Since 1951 the National Society for the Prevention of Blindness, in cooperation with local health departments, has been able to demonstrate in 34 continuing projects that preschool vision screening carried out by well trained volunteer groups can be a practical and effective community health service. To date, in all of these projects, a total of 55,179 children have been screened and 2,286 of these referred for eye care. . . . The average referral rate has been between 5 and 6%." A number of individual projects are described. —I. Altman.

719. GENTRY, JOHN T. (State Dept. of Health, Albany, N.Y.), **PARKHURST, ELIZABETH, & BULIN, GEORGE V., Jr.** **An epidemiological study of congenital malformations in New York State.** *Amer. J. publ. Hlth*, 1959, **49**, 497-513. A study of birth certificates in New York State, exclusive of New York City, over an 8-year period showed rates of 20.0 malformations per 1000 live births in 186 townships as compared with a general incidence of 13.2. Contiguous groupings of these high rate townships were noted for three areas. An independent geological study of the State found that the most highly radioactive materials were located in areas with outcrops of igneous rocks. These areas had the highest malformation rate, 17.5. Areas with extensive deposits of glacial materials had a rate of 15.4. In areas of "probable" radioactive materials the malformation rate was highest, 16.9, in communities deriving their water supplies from wells and springs, the lowest, 12.4, in those utilizing surface waters. Special epidemiological field studies were made in groups of contiguous townships with relatively low and relatively high malformation rates. These showed no differences in respect to a wide variety of possible etiological factors—age of mother and father, birth order, occupation of father, medical radiation, infectious disease early in pregnancy, and other items. Field measurements of external environmental radiation levels were found to lie mainly in the interval of 8 to 12 μ r per hour with appreciable departures from this range at points adjacent to exposed minerals having an elevated radioactive content. —I. Altman.

720. HUGHES, D. E. (Univ. of Oxford), **RODGERS, K., & WILSON, D. C.** **Thyroid enlargement in school children of North Oxfordshire.** *Brit. med. J.*, 1959, **1**, 280-281. A survey for thyroid enlargement was conducted in the same geographic

area where a previous study, in 1944, had shown a higher incidence of enlargement than normal. This area lay on a belt of limestones and marked where the content of iodine in the soil and circulating water was low. The mean incidence of enlargement was 40% as compared with 6% among a control group of urban school children. The high incidence of thyroid enlargement represented an increase over the 27% noted in 1944. —W. W. Sutow.

721. JANDA, F. (Praha 12), & VANĚČKOVÁ, M. *Vývoj mládeže na vesnici.* (The development of youth in the villages.) *Česk. Pediat.*, 1959, **14**, 236-240. The authors have attempted to study the degree of development of 128 children of pre-school age, 1718 of school age, and 2139 juveniles who were born and living in villages, to determine the reasons for differences in growth from urban children, and differences between various village groupings. It has been clearly shown that hygienic conditions for all groups were exactly the same, so that there is no such factor between agricultural and non-agricultural families as regards school-age children. Differences occur with the juveniles, who start work or apprenticeship early. —English Summary.

722. MOLNER, JOSEPH G. (Detroit & Wayne Co. Dept. of Health), BRODY, JACOB A., & AGATE, GEORGE H. *Detroit poliomyelitis epidemic—1958: Preliminary report.* *J. Amer. med. Ass.*, 1959, **169**, 1838-1842. A major epidemic of polio occurred in Detroit in 1958. This one was concentrated in one area of the city whereas previous outbreaks had shown little selectivity. Cases not in this central area were almost all nonparalytic. There was a concentration of cases among children under 3 years and a relative scarcity among adult females, reflecting vaccination status. Only 4.8% of the paralytic patients had received three or more doses of vaccine; among nonparalytic cases, 38.4% had been triply vaccinated. A vigorous program of vaccination was subsequently instituted with over 2 million doses being administered by official agencies and private physicians. —I. Altman.

723. ROUŠAROVÁ, J., ŠOBOVÁ, A., & ZNAMENÁČEK, K. *Některé znaky kvality péče o fyziologické novorozence.* (Some signs of the quality of care of normal newborns.) *Česk. Pediat.*, 1958, **8**, 971-981. Over a three year period we have followed statistically the following factors on a normal newborn ward: number, sex, birth weight, type of birth, hospitalisation period, and time spent by each sister with each child. As a measure of how the child prospered the following were taken: weight gain, amount taken in, vomiting and regurgitation, nutrition at discharge, variation in body temperature, number of stools, occurrence of erythema and intertrigo, toxic exanthems, staphylocodermia, conjunctivitis and thrush. The occurrence of some of these signs were compared in children in various weight groups from 2 kg. birth weight, and with children born by Caesarian section. The conclusion is offered that follow-up of qualitative indicators of care of newborns has a basic significance for the operation of the ward. —English Summary.

724. SCHLESINGER, EDWARD R. (State Dept. of Health, Albany, N.Y.), AL-LAWAY, NORMAN C., & PELTIN, SEYMOUR. *Survivorship in cerebral palsy.* *Amer. J. publ. Hlth.*, 1959, **49**, 343-349. Surveys of cerebral palsy prevalence find a much lower rate with advancing age after adolescence. A three-year period of mandatory reporting in New York State made possible a survivorship study on a group of 3108 individuals born prior to January 1, 1950 (between 1933 and 1950) and for whom the years of survivorship from January 1, 1950 to June 30, 1957 could be computed. The number of deaths per 1000 person years was calculated for each sex-age group. A total of 205 deaths was found. "The death rate of 9.6 per 1000 person-years among males was 13 times the expected rate. The death rate of 8.5 per 1000 person-years among females was 17 times the expected rate. The group with severe physical limitations had a mortality rate 27 to 30 times that expected in the corresponding age-sex groups of the general population. Those with mild physical involvement had a mortality rate from four to five times greater than expected." —I. Altman.

725. SMITH, CLEMENT A. (Harvard Med. Sch.) **How we take care of newborn infants. II.** *Ann. paediat. Fenniae*, 1958, 4, 147-160. A description of pediatric practices in the Boston Lying-In Hospital.

726. WORTIS, JOSEPH (Jewish Hospital of Brooklyn, N.Y.), & GIANCOTTI, ANTONIO M. **A new simple test paper for mass detection of phenylketonuria.** *Amer. J. publ. Hlth*, 1959, 49, 463-464. "Since phenylketonuria, a metabolic anomaly associated with mental retardation, can now often be beneficially treated with a phenylalanine-free diet, it has become desirable to detect its presence as early as possible, since the diet loses its efficacy as the child grows older." Test papers have been developed which need only be immersed in a fresh urine specimen or pressed against a wet diaper and examined for color change. These papers were sent to the families of 600 cases of retardation. In a return of 440 cards 2 were positive. These were cases which had already been diagnosed, the study thus confirming the value of the testing paper as a screening procedure. Its widespread use is recommended. —I. Altman.

727. A.M.A. Committee on Toxicology. (535 N. Dearborn St., Chicago, Ill.) **Accidental iron poisoning in children.** *J. Amer. med. Ass.*, 1959, 170, 676-677. Orally administered iron preparations have again returned to medical favor, but a general lack of awareness of the hazards of overdoses, especially in small children, persists. National mortality statistics show that 30 deaths from ferrous sulfate occurred among children in the years 1949 through 1956. Morbidity data are lacking, but the New York City Poison Control Center encountered 35 cases in a 2½ year period. Mechanism of action, symptoms and treatment are briefly described. The recommendation is made that ferrous sulfate and similar hazardous iron salts be labeled with a caution statement about the hazards of excessive doses. —I. Altman.

HUMAN BIOLOGY AND DEMOGRAPHY

728. AIRD, I. (Univer. of London) **Conjoined twins—further observations.** *Brit. med. J.*, 1959, 1, 1313-1315. Some account is given of three sets of living conjoined twins and four stillborn pairs of conjoined twins that have come to our attention. A possible instance of a freemarten effect in human conjoined twins is illustrated. The arguments for a monovular origin for the very large majority of conjoined twins are presented, but it is suggested that conjunction may really be due to the union of binovular germinal areas, and it is suggested that chimerism should be sought in conjoined twins. —Author's Summary.

729. ALLAN, T. M. (Royal Infirmary, Aberdeen) **ABO blood groups and sex ratio at birth.** *Brit. med. J.*, 1959, 1, 553-554. All known series of blood-grouped newborn babies and their parents are combined and analyzed in respect to sex ratio, and three main observations are made: (1) In accordance with Hirszfeld and Zborowski's findings, the sex ratio of the babies of white group AB mothers is, in the aggregate, significantly higher than that of the babies of O, A, and B mothers combined. (2) In accordance with Sanghvi's findings, the sex ratio of the white O babies, of O mothers is, in the aggregate, very significantly higher than that of A babies of A mothers. (3) The sex ratio of the white O babies as a whole is, in the aggregate, very significantly higher than that of the A babies as a whole. From these observations it may be concluded that the existence of blood-group differences in the human sex ratio at birth is now a very strong probability at any rate in the white races. —Author's Conclusions.

730. ARONSON, STANLEY M., ARONSON, BETTY E., & VOLK, BRUNO W. (Univer. of New York Coll. Medicine, Brooklyn) **A genetic profile of infantile amaurotic family idiocy.** *Amer. J. Dis. Child.*, 1959, 98, 50-65. 131 confirmed cases of infantile amaurotic family idiocy were statistically evaluated in regard to nature of birth, time and manner of inaugurating abnormalities, duration, family

background (illnesses, places of origin, religion, consanguinity), and familial and sex incidence. In conformity with previous observations, the large majority of the patients were of Jewish extraction with antecedents derived from northeastern Europe. The probability of homozygosity was calculated and shown to indicate a recessive disorder with complete penetrance. Eight patients with Niemann-Pick's disease and five patients with juvenile amaurotic idiocy were similarly assessed. —Authors' Summary.

731. DALY, DAVID D., & YOSS, ROBERT E. **A family with narcolepsy.** *Proc. Mayo Clinic*, 1959, 34, 313-319. "This family represents what may be a unique study in narcolepsy. Through a concatenation of circumstances, members of three generations of an unusually large family, most of whom live in a proximate geographic area, were willing to cooperate in this investigation. We employed the criteria we have elaborated elsewhere, and personal interviews disclosed a total of 12 instances of narcolepsy and three of suspected narcolepsy in three generations of this family. Anamnestic evidence suggests the presence of the disease in the paternal grandfather of the proband. On the basis of this evidence we conclude that in this family narcolepsy is a hereditary disorder. The data demonstrate strikingly our conviction that heredity plays a significant role in the genesis of narcolepsy. Previous experience with a large series of narcoleptic persons had disclosed a considerable number of families in which more than one member was thus afflicted. . . ."

732. FALEK, ARTHUR. **Handedness: a family study.** *Amer. J. hum. Genet.*, 1959, 11, 52-62. Handedness was studied by a demonstration test, by 5 motor tests, and a questionnaire in 53 families selected from 10,236 parents of students in New York City to include matings of the four types. The frequency of left handed children was markedly higher in families with a right handed father and a left handed mother, but there was no difference in the frequency of left handed children in families where the parents are both right handed or both left handed. Interviews with 19 families gave evidence for constant home pressure for right handedness on 3 out of the 4 left handed children of parents who were both left handed but only minor pressure on the 6 left handed children of the other mating types. The author concludes that the hand preference of an individual is the result of both genetic endowments and early training. The frequency of left handedness reported in the 10,236 parents was 3.10% for the mothers and 3.88% for the fathers. This difference is not significant. —S. G. Vandenberg.

733. KERR, M. M. (Glasgow Royal Maternity and Women's Hosp.) **Anaemia and polycythaemia in uniovular twins.** *Brit. med. J.*, 1959, 1, 902-903. Four cases of monozygotic twin pregnancy are described, in each of which one twin exhibited a polycythaemia and the other an anaemia. In two of the four cases the anaemia was severe enough to warrant blood transfusion. The aetiology of the syndrome remains obscure, but must depend on direct communication of the two foetal circulations. —Authors' Summary.

734. KITCHIN, F. D. (David Lewis Northern Hosp., Liverpool), HOWEL-EVANS, W., CLARKE, C. A., MCCONNELL, R. B., & SHEPPARD, P. M. **P.T.C. taste receptor response and thyroid disease.** *Brit. med. J.*, 1959, 1, 1069-1074. The P.T.C. taste threshold was determined in 447 patients with thyroid disease and in a control group of 265 individuals by the eight-glass technique of Harris and Kalmus. In 246 cases of adenomatous goitre, a significantly high incidence of non-tasters (genotype tt) was found, and this was proportionately greater in men (60%) than in women (36.6%). In 133 patients with toxic diffuse goitre a significant excess of tasters was found (genotypes TT, Tt) but without sex difference. The findings suggest that the taster/non-taster genotypes are of importance in determining the type of thyroid disease, and the possible mechanisms are discussed. The distribution of the ABO blood groups and secretor status in multi-adenomatous and toxic diffuse goitre was not found to differ significantly from that of the control group. —Authors' Summary.

735. KRAUS, B. S., WISE, W. J., & FREI, R. H. **Heredity and the craniofacial complex.** *Amer. J. Orthodont.*, 1959, 45, 172-217. Six sets of like-sex triplets were studied via lateral and frontal X-ray films. Zygosity was established via blood

grouping, probability estimation based on parents' blood groups, lower Pm 1 structures, Carabelli's anomaly, fingerprint patterns and ridge counts, taste-test for sensitivity to PTC, height, weight, and body build. The craniofacial complex was divided into cranial vault and facial complex, and each of the major areas was carefully analyzed in detail. As a result 17 discrete "bone profiles" or "bone traits" were isolated. The concordant or discordant behavior of each trait was noted in the children studied. It is concluded that "the morphology of all the bones of the craniofacial complex is under the rather rigid control of hereditary forces." However, "environment in its multitudinous facets has much to say about how these bony elements shall combine to achieve . . . harmonious (or unharmonious) head and face." —W. M. Krogman.

736. LOWRY, DOROTHY C., & SCHULTZ, F. T. **Testing association of metric traits and marker genes.** *Ann. Hum. Genet.*, 1959, 23, 83-90. An analysis of variance model is presented which assumes that a metric trait can be decomposed into (a) overall mean (b) an additive genotypic contribution from each parent (c) a contribution from the blood group genotype (d) a condition from both parents together (i.e., family) due to interaction of blood groups (e) a random contribution for each individual. —S. G. Vandenberg.

737. MANSBRIDGE, J. N. **Heredity and dental caries.** *J. dent. Res.*, 1959, 38, 337-346. The study is based on 224 pairs of like-sex twins, age 5 to 17 years, classed as identical or fraternal on the basis of physical resemblance and fingerprints (96 pairs identical, 128 pairs fraternal). For each pair an unrelated child was studied, of same age, sex, and having the same number of teeth erupted as one of the twins. This child, paired with the one twin, gave a "control pair." The data showed resemblance in caries experience greatest in identical twins, with fraternal twins and control pair following, in order. It is concluded "that environmental factors clearly have greater influence, but that genetic factors also contribute to the causation of dental caries." —W. M. Krogman.

738. QUICK, A. J. (Marquette Univer. Sch. Med., Milwaukee, Wis.) **The hereditary haemorrhagic diseases: their classification and diagnosis.** *Brit. med. J.*, 1959, 1, 1059-1062. The hereditary hemorrhagic diseases are concisely and completely discussed by an authority in this specialized field of hematology. Three major categories are given: I. Clotting dysfunction (haematostaxis), II. clotting defect combined with vascular dysfunction (haematostaxis and angiostaxis), and III. vascular abnormality (angiostaxis). Under each of these headings, a number of specific entities are described and the key diagnostic tests as well as the type of heredity involved are indicated. Recent findings emphasize the need for re-valuation of the commonly held views on hemostasis. —W. W. Sutow.

EDUCATION

739. BERNHARDT, KARL S., JOHNSTON, FRANCES L., FOSTER, NAN, & BROWN, MARGUERITE. (Univer. of Toronto, Canada) **Attitude change in members of parent education courses.** *Ment. Hyg.*, 1959, 43, 394-399. Parent's attitudes at the beginning and at the end of 10 two-hour, weekly parent education meetings were evaluated, using the Q-sort technique. In both instances the 39 class members were asked to sort statements first from "most like myself" to "least like myself" and then to sort in terms of "what I think a parent should be," thus arriving at "self" and "ideal" sorts. There was little change in the "ideal" held by these parents during the interval studied. There was, however, considerable and varied change in the "self" category. The authors state, "these values would seem to suggest that attendance at a parent education course brings about greater change in how the person views himself as a parent than in his picture of what a parent should be like." Detailed summaries of the changes taking place in five of the subjects are presented. —R. L. Witherspoon.

740. BRYAN, DOROTHY. (Illinois Dept. of Public Instruction, Springfield) **Educational programs needed for partially seeing children.** Amer. J. publ. Hlth, 1959, 49, 766-770. A variety of plans are used among school systems to provide for the education of partially seeing children. Segregated classes and programs in special schools are on the way out; the trend today is to establish special classes on the cooperative plan, the pupils carrying out as many activities as possible with the normally seeing children. Classes should be small and the curriculum of the school followed closely. In some rural areas where classes cannot be established, an itinerant teacher is employed to work with the child, in cooperation with the classroom teacher, to enable him to carry on the regular school program. Where special services cannot be given, the Illinois State Department of Public Instruction offers guidance to classroom teachers through bulletins of instructions and suggestions and actual visits. Large-type books are provided if they will be helpful, and reimbursement for reader service is available for those who need it. —I. Altman.

741. HOFFMANN, HELMUT. (Greenfield Village Sch., Dearborn, Mich.) **Children's drawings as an indication of readiness for first grade.** Merrill-Palmer Quart., 1958, 4, 165-179. Assuming that expression in one area, such as drawing, is to a certain extent relevant to the individual's total operational level, the investigator studied 428 drawings made by 18 kindergarten children in terms of significant differences which appeared consistently. Four criteria were derived, namely: (1) creative approach to the task, (2) composition of the picture, (3) color usage, (4) orientation to the task. Each picture was rated from 1 to 5 on each of the criteria and an average score was computed for every child. Rank order correlations ranging from .85 to .92 were found between these scores and kindergarten and first grade teachers' ratings of each child on (1) general maturity, (2) functioning in school, and (3) abilities. Correlations between the drawing scores and certain objective test scores were significant at the 5% level of confidence. The author states that the findings lend strong support to the hypothesis that the nature of children's drawings in kindergarten indicates their general school-readiness level. —G. E. Chittenden.

742. KOPPITZ, ELIZABETH M., SULLIVAN, JOHN, BLYTH, DAVID D., & SHELTON, JOEL. (Children's Mental Health Center, Columbus, Ohio) **Prediction of first grade school achievement with the Bender Gestalt Test and Human Figure Drawings.** J. clin. Psychol., 1959, 15, 164-168. This study tests the hypothesis that the Bender Gestalt Test and Human Figure Drawings administered at the beginning of the first grade can predict school achievement at the end of the year. The Ss were 143 children from six beginning first grade classes. All Ss were asked to draw "a whole person" in the classroom and were administered the Bender individually. The tests were scored according to the Koppitz system and were then correlated with scores from the Metropolitan Achievement Test, Primary I Battery, Form R which was administered seven months after the first two tests. The results show that the Bender and the Drawings both have the ability to predict achievement, but this power increases when they are used together as multiple predictors. On all three tests used in this study marked differences were found between the scores of the various classrooms. These differences seem to reflect in part socioeconomic and cultural variables. Thus the results of intelligence tests given by the school indicate that more than half of the lower class children in our study have at least normal endowment, but only very few of these children showed even low average achievement. This may be largely due to immature perception and coordination reflecting poor physical care, to the absence of motivation for learning, and the abundance of emotional problems as revealed in the Bender and Drawings. Middle class children were found to be under considerable pressure for achievement which seems to result in good academic success but also in many emotional problems. They seem to be functioning up to the level of their capacity. Upper middle class children were found to have good intelligence and showed a balance of both pressure for achievement and emotional problems. Their test performances were outstanding and placed them about six months above the average performance for the six classes as a whole. —Authors' Summary.

743. NISBET, JOHN (Univer. of Aberdeen), & BUCHAN, JIM. **The long-term follow-up of assessments at age eleven.** *Brit. J. educ. Psychol.*, 1959, **29**, 1-8. The careers of 102 students who entered Aberdeen University from Aberdeen City schools in 1953 were traced from the end of primary school to fourth year at university. Of those who entered Aberdeen County secondary schools in 1950, 153 sat the Leaving Certificate at the end of secondary education, and 46 entered Aberdeen University; their careers were traced from primary school to first-year university. In both investigations scores in tests at the age of eleven-plus were compared with subsequent performance in Leaving Certificate and university examinations, as a check on the accuracy of the tests in predicting high scholastic achievement six to ten years later. The results show that even in this highly selected group, the tests at age eleven-plus are not without validity; but the agreement between test scores and university performance is not high, particularly in science courses. Correlations between five primary school assessments in the City group and fourth-year university performance is not high, particularly in science courses. Correlations between five primary school assessments in the City group and fourth-year university performance ranged from $+0.05$ to $+0.28$. In the County group, out of 77 who gained university entrance qualifications, 19 had scored below IQ 110 in the test at the end of primary school. Examples of poor subsequent performance by high scorers in the selection tests at eleven-plus, and of excellent performance by low scorers, indicate that, within this group and over this interval of years, accurate prediction of scholastic attainment is not possible. —Authors' Summary.

744. PIÉRON, H., REUCHLIN, M., et al. **Études docimologiques; de l'enseignement primaire à l'enseignement secondaire.** (A normative study; from elementary school to high school.) BINOP, 1958, **14**, special no. This monograph consists of reports on several studies of the reliability of high school entrance examinations in France made in 1954-1957 by the French National Institute of Vocational Guidance. The agreement between judges of these examinations was found to be poor. An incidental finding was that at least 20% of the better students did not plan to enter a high school with an academic program. Details of the examinations as well as of the grading systems are provided as well as suggestions given for the improvement of such examinations. —S. G. Vandenberg.

SOCIOLOGY

745. BALDWIN, WILLIE K. (Columbia Univer., New York City) **The social position of the educable mentally retarded child in the regular grades in the public schools.** *Except. Child.*, 1958, **25**, 106-108. The purpose of this study was to determine the social position of mentally retarded children enrolled in the regular grades of a public school system, and to determine the possible relationship of other factors to this position. The population consisted of 572 nonretarded and 31 retarded children in 22 fourth, fifth, or sixth grade classes in 10 elementary schools in a large public school system in an eastern state. Data were collected by means of the WISC, the Ohio Social Acceptance Scale, the Ohio Social Recognition Scale, individual interviews with teachers, and an interview with one group of fifth grade pupils. By chi square analysis the results were that the retardates were less accepted socially than were the nonretarded children. Further, the mental level, sex, CA, and grade level of the retardates and the median intelligence of the class in which they were placed did not seem to be related to their social position scores. —J. W. Fleming.

746. BARRY, H., III, CHILD, I. L., & BACON, MARGARET K. **Relation of child training to subsistence economy.** *Amer. Anthropol.*, 1959, **61**, 51-63. In a study of 104 societies it was found that type of subsistence economy was significantly related to strength of socialization so that societies with high accumulation of food resources exerted greater pressure toward responsibility and obedience and lower pressure toward achievement, self-reliance, and independence than did those with low accumulation. In general, the former emphasized compliance, the latter, assertion.

- 747. JAHODA, GUSTAV.** (Glasgow Univer.) **Development of the perception of social differences in children from six to ten.** *Brit. J. Psychol.*, 1959, **50**, 159-175. A sample of 179 boys and girls, in four age groups and four social classes, were tested for ability to perceive social class differences by a pictorial technique. In this test, figures dressed in middle or working class clothes were to be placed in middle or working class settings. Scores were derived both for performance and verbal response. Intelligence scores were also obtained. Social perception scores increased significantly with age. Social perception scores also differed for the different social classes, but these differences disappeared for all except the lower middle class girls when intelligence was held constant by analysis of covariance. "An incipient social class concept can exist without the facility for giving it any verbal expression. An examination of the ways in which children build up a conceptual framework regarding social differences indicates that occupational differences tend to come first with all children; later these are linked with differences in wealth, income and in the case of middle-class children to some extent style of life. While a cognitive grasp of social differentiation is primarily dependent upon intellectual level, attitudes and feelings are largely determined by influences emanating from the child's particular social environment." —R. N. Walker.
- 748. KOHN, MELVIN L.** **Social class and the exercise of parental authority.** *Amer. sociol. Rev.*, 1959, **24**, 252-366. The conditions under which middle- and working-class parents punish their preadolescent children physically, or refrain from doing so, appear to be quite different. Working-class parents are more likely to respond in terms of the immediate consequences of the child's actions, middle-class parents in terms of their interpretation of the child's intent in acting as he does. This reflects differences in parents' values: Working-class parents value for their children qualities that assure respectability; desirable behavior consists essentially of not violating prescriptions. Middle-class parents value the child's development of internalized standards of conduct; desirable behavior consists essentially of acting according to the dictates of one's own principles. The first necessarily focuses on the act itself, the second on the actor's intent. —Author's Abstract.
- 749. LEVINSON, BORIS M.** (Yeshiva Univer., New York City) **Cultural pressure and WAIS scatter in a traditional Jewish setting.** *J. genet. Psychol.*, 1958, **93**, 277-286. It was hypothesized that the emphasis on verbal accomplishment in certain American subcultures leads to a "deviant performance" on the Wechsler Adult Intelligence Scale. The WAIS scores of a sample of 64 college students subjected to traditional Jewish cultural values were studied. The mean Performance Scale IQ was 105.30 and the mean Verbal Scale IQ was 125.59, this difference being statistically significant. Of 55 critical ratios of differences between means of subtest scores, 47 were significant at the .02 level or better. It was inferred that the cultural influence of traditional Jewish values brought about this disparity, that other American subcultures which emphasize verbal ability will bring about a somewhat similar "deviant" pattern, and that there is no necessary pathological significance to such scatter. —From Author's Summary.
- 750. ORGEL, RITA G.** (Merrick, New York, Elem. Sch.) **The relationship of the H-T-P to a sociometric evaluation of a group of primary grade school children in determining the degree of social acceptance.** *J. clin. Psychol.*, 1959, **15**, 222-223. A sociometric questionnaire (used as a measure of personal popularity) and the House-Tree-Person Test were administered to 32 white children in a primary grade in a public elementary school situated in a suburban Long Island community. The H-T-P drawings were evaluated by an impartial judge experienced in the H-T-P technique using a checklist of 37 items devised to evaluate variables of social adjustment. It was found that the overall H-T-P drawing scores showed a correlation of .271 with the sociometric evaluation, not significant at the .05 level of confidence. The "House" and "Person" drawings correlated with the sociometric evaluation, and are significant at the .05 level of confidence. The "Tree" showed a negative correlation (—173). —Author's Summary.

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751. SPUHLER, J. N., GERARD, RALPH W., WASHBURN, S. L., HOCKETT, CHARLES F., HARLOW, HARRY F., & SAHLINS, MARSHALL D. **The evolution of man's capacity for culture.** Hum. Biol., 1959, 31, 1-73. Six essays on the evolution of man's cultural capacity are included, covering the fields of anatomy, physiology, psychology, language, culture, and society. These papers constituted a symposium held at the 1957 annual meeting of the American Anthropological Association. The titles of the individual papers, in order of authorship as above, are: "Somatic paths to culture," "Brains and behavior," "Speculations on the interrelations of the history of tools and biological evolution," "Animal 'languages' and human language," "Basic social capacity of primate," and "The social life of monkeys, apes and primitive man." —D. H. Eichorn.

Editorial Note

Marian L. Faegre has called our attention to the unfortunate implication in entry no. 439, June-August, 1959, that all children in the sample of 201 tested escaped. The fourth sentence should have read: "Of the 97 children who got out by their own efforts, approximately three-fourths released selves in less than three minutes; one fourth in less than 10 seconds."

Book Notices

752. ACKERMAN, NATHAN W. **The Psychodynamics of Family Life.** New York: Basic Books, 1958. 395 p. \$6.75. Many books on the family that appear today represent a vogue rather than a contribution. This book is a contribution. Its four main divisions are: (a) the theoretical aspects of family dynamics, (b) clinical aspects, (c) therapeutic treatments, and (d) some wider aspects of family research and family values. The approach is psychoanalytic; the orientation, Freudian, revised; the area, the middle class, white, urban family which most often contacts the psychoanalysts. There is considerable appreciation of the role of culture in molding the family constellation and parental functioning, and other factors stressed by cultural anthropologists and sociologists. The author's recurring insistence that the family group must be studied as a unit may seem radical to analysts who work mainly or exclusively with the individual patient; to the present reviewer it falls short in not including the larger household complex, with its possible inclusion of relatives, servants, domestic pets, guests, echoes of parental occupation and the like. The necessity for thoroughgoing diagnosis is emphasized continually, lest "therapists treat without knowing what they treat." The book is stimulating and suggestive throughout; its style, clear and readable. Finally, and not without importance, Ackerman writes with the humility of the scientist and the insight of scholarly maturity. —J. H. S. Bossard.

753. DUVALL, ELLEN NEALL. **Kinesiology: The Anatomy of Motion.** New York: Prentice-Hall, 1959. 292 p. \$5.75. This volume owes an acknowledged debt to Wright's "Muscle Function," but it is quite capable in its own right. In essence it is "the scientific study of movements," with specific and detailed reference to the human body. The orientation is to a body functioning at more or less adult level. If there are any age changes or any growth stages in muscle function and/or inter-ordination they are not discussed. The information presented is gained, according to Duvall, via cadaver anatomy, via the study of paralytics, and via analysis of movement(s) in normal individuals. In the latter area information is gained via palpation, via electromyography, and via cinephotography. It is suggested that those concerned

with kinesiology should know (in addition to human anatomy) muscle physiology, the chemistry of neuromuscular function, and the basic concepts of mechanical physics. After a short but concise discussion of the skeleton, neuromuscular mechanisms, bone-muscle mechanics, and joints and joint movements, Duvall presents the bulk of the book, the function of individual muscles: lower extremity (hip, knee, ankle, foot); trunk (pelvic girdle, vertebral column, thorax, abdominal muscles); upper extremity (shoulder, elbow, wrist, hand). Each muscle is individually discussed in terms of nerve supply, location, and function; it is then fitted into a group-function concept for area and for joint. Excellent line drawings by Helen Lorraine demonstrate the location of single or group muscles. There is a final chapter on problems of analysis of motion that is in the nature of a functional summary. I think workers in the area of child development will find this a useful reference work. —W. M. Krogman.

754. FLINT, BETTY MARGARET. *The Security of Infants*. Toronto: Univ. of Toronto Press, 1959. 134 p. \$3.50. This book describes the construction and application of an Infant Security Scale for the evaluation of mental health in infants. It is a diagnostic check-list covering the whole range of infancy from birth to 24 months. The scale is made up of a series of items, which in the opinion of the author are significant indicators of personality. These items are arranged in three categories: those that indicate security, insecurity, or the habitual use of avoidance mechanisms which the author, adopting the terminology of W. E. Blatz, designates as "deputy agents." Indeed, the criteria for the selection of behavior items to be included in the three categories is based upon the security theory of Blatz. Briefly, the theory relates the healthy growth of personality to a close dependent relationship of the baby with a mother-figure; this results in a state of dependent-trust in her care and affection and in turn results in the child's concept of himself as being worthwhile; the child develops "self trust"—without which he cannot be effortful, outgoing, and independent. The author presents this book as an interim report. The scale will probably undergo further modification. Many of the items will not be unreservedly accepted by the reader as being relevant or characteristic or properly placed in the respective categories. This reviewer, for instance, questions the inclusion among the insecurity signs of such items as feeding difficulties, hyperactivity, frequent temper tantrums and short attention span, since these features are observed in many brain-injured children whose behavior disorders are manifestations of organicity and not of basic insecurity. The scale is said to be of value in appraising the personality of children for whom adoptive placement is being considered. In the opinion of this reviewer, the major value of the scale consists in offering a measure of the degree to which the developing personality is being affected by mother-deprivation; while, from the practical standpoint, the fact remains that early adoptive placement constitutes, by and large, the most crucial and positive contribution that can be made towards the future mental health of the infant without a family. In other words, while the use of the Infant Security Scale may add greatly to our knowledge of the early personality development of a given infant, it should not be used as a criterion for determining his eligibility for adoptive placement. —J. H. Di Leo.

755. HAEUSSERMANN, ELSE. *Developmental Potential of Preschool Children*. New York: Grune & Stratton, 1958. 285 p. \$8.75. The evaluation of intellectual potential in the child with a sensory or neuromuscular dysfunction has always presented a formidable challenge, even to the most experienced examiner. The use of standard tests has generally been most unsatisfactory, even when these tests have been modified and adapted. More often than not, evaluation to be of any value at all must be to a great degree subjective, the result of an individual examiner's clinical acumen and mature judgment. In the face of recurrent, at times insurmountable difficulties, the author decided to make a basic departure from what had hitherto been undertaken. In the first place, she altered the primary objective: only secondarily concerned with the child's status vis-a-vis his age-mates, the focus was shifted towards assessing the individual child's abilities and learning processes with a view to providing appropriate training and education through the best utilization of his resources. And in order to emphasize the primary objective, the author called her procedure an "Educational Evaluation." This manual represents the fruit of 25 years of observation,

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study and impassioned interest in the welfare of children with neuromuscular and sensory disabilities. The author has succeeded to a remarkable degree in transmitting to others much of her technic and even some of her skill. The testing materials are simple and adaptable for presentation to children with varied sensorimotor handicaps. The child may be examined while sitting with or without support or even lying on his back. Speech is not required, only an assenting nod or movement of the eyes. The method is not designed to yield a numerical quotient. It is a clinical method and as such dependent to a great extent upon the experience and judgment of the examiner. At the same time, it is sufficiently formal to permit its valid use by other experienced, skillful examiners. It is a practical solution to a practical problem. For those interested in the actual use of the method, there are informative chapters on establishment of rapport, induction to examination, test procedures, motivation of the uncooperative, scoring and appraisal, and modifications to meet special difficulties. Since the aim is to uncover abilities and weaknesses, the manner of presentation of the test materials may be altered and new motivations introduced until it becomes clear that the child is able or unable to perform in a given area. This philosophy of using any means to attain the end is a significant departure from the rather rigid methodology of many standard procedures, where the fear of introducing variables renders the standard test inapplicable to children who deviate in their manner of receiving from and responding to their environment. Also characteristic of the author's method is the principle of diminishing demand. Starting at the top, the level of demand is progressively lowered until the child responds; this level is then regarded as his functional or Developmental Level. This sequence is at variance with other technics that first permit the child to taste success with an easier task so that he may be positively motivated to attempt another, more difficult task in the same category. The Educational Evaluation was originally designed for children with neuromuscular disability. Subsequently, it was modified for use with other functionally impaired children. Modified directions are offered for use with deaf, aphasic, and non-English speaking children. The method is an educational evaluation and not a psychometric test. Used effectively, it can provide a basis for planning an educational program appropriate to an individual handicapped child. In the reviewer's opinion, the manual under consideration is a highly important contribution to the truly significant literature on handicapped children. —J. H. Di Leo.

756. HURLOCK, ELIZABETH B. **Developmental Psychology.** (2nd Ed.) New York: McGraw-Hill, 1959. 645 p. \$6.75 This book is intended as a text and reference in developmental psychology, a field that has had an increasing amount of attention since the first edition of this text. The purpose is to give a picture of the total life span presenting therein a picture of developmental changes. The chapters dealing with the various periods in development generally treat physical, motor, speech, emotional, social, and certain other phases of development. Each chapter then takes the reader through the ensuing stages of development. Considering the great amount of research done in the field of child and adolescent development, rather adequate summaries or overviews of the topics are presented. The text is generally well documented with research studies, a characteristic of Hurlock's writings, and hence produces a valuable starting point for one being introduced to research in developmental psychology. Emphasis is placed on the effects of cultural and social class influences on the development of the individual. Those with an organismic viewpoint of development might differ with the picture presented of the course of development. The cyclic nature of growth is not stressed. However, the section on significant facts about development is particularly well done, and a clear presentation in summary of certain essentials. While the text states that development follows a definite and predictable pattern, this is not clearly brought out in the following chapters that treat specific periods in human development. The interaction of all growth is not always stressed as the course of development is traced. From the student's point of view the text might have been made more interesting by following several cases longitudinally to illustrate development. Also, such teaching helps as chapter questions are not included. The extremely adequate bibliographies are a compensating feature for the student interested in research. As a whole, the book

presents a comprehensive, clearly written overview of developmental psychology. —D. Dinkmeyer.

757. HUTT, MAX L., & GIBBY, ROBERT GWYN. *The Child*. Boston: Allyn & Bacon, 1959. 401 p. \$6.00. With the publication of a new textbook in a field in which there are already many good texts the question arises, "What does this one have the others don't?" The answer is hard to find for Hutt and Gibby's "Child." Perhaps the most unique feature of the book is its strong clinical and psychoanalytical flavor. The authors are clinical psychologists who have drawn heavily from their clinical experience and who have taught child development not only to teachers and psychologists but to social workers, psychiatrists, and medical students. The present volume seems particularly suited for these latter groups. In organizing and presenting the material "primary consideration (was given) the way in which the child's personality matures and develops." Child development is divided into seven different divisions and is presented so as "to give emphasis to each topic at the developmental level at which it had the greatest pertinence." The developmental stages, chapter titles, are: The Birth of a Child; Development in Infancy—"As the Twig is Bent"; The Early Formative Period (2-3 years); Early Childhood—The Preschool Years; Early School Years—Socialization Away from Home (6-10 years); Intermediate School Years—Integration and Stabilization (10-13 years); and The Crisis of Puberty. There are three additional chapters. The introductory chapter is a discussion of personality and the patterns of child development. Another chapter discusses the cultural influences on the child and a last chapter is concerned with the prevention, correction, and treatment of childhood disturbances. Almost two-thirds of the book is concerned with the child below the age of 6 years. A noticeable omission is the usual chapter or section on the methods of studying child development. Teachers using this text will probably find it necessary to explain further many of the psychoanalytical explanations offered. The toughminded users of this book will find adequate material with which to sharpen their toughminded arguments. The material supported by the publications of Ribble, Spitz, and Sheldon are examples. In general, the book is well written and should be appropriate as a text in courses that are not prerequisite to higher level development courses. —L. Harrell.

758. JOHNSON, WENDELL (and Associates). *The Onset of Stuttering*. Minneapolis: Univer. of Minnesota Press, 1958. 519 p. \$5.00. In this book Johnson and associates report a program of intensive and detailed research concerned with these basic questions: In what form, at what time, under what conditions, and for whom does the problem of stuttering arise? Three related investigations are reported as Study I (1934-1940), Study II (1948-1952), and Study III (1952-1957). Johnson points out that since there is no standard operational definition of the terms, stuttering and stuttrer, before the research program could be initiated, it was necessary to establish the criteria for identifying both the stuttering and the nonstuttering children who were to comprise the experimental and the control groups. In Study I children were placed in the former group if they had been diagnosed as stutterers by relatives, teachers, friends, or neighbors. Such children had been referred for remedial advice and help. In Study II any child was considered a stutterer if his family had been concerned enough about his nonfluencies to label them and seek professional help. In Study III a child was accepted in the group of stutterers if he was considered to be a stutterer by at least one parent. A child was accepted as a nonstutterer only if parents, teachers, and others associated with him did not judge him to be a stutterer. In Study I each group included 46 children; in Study II, 50 children, and in Study III, 150, a total of 246 children judged by their parents to be stutterers and 246 children judged by their parents to be nonstutterers. Data were obtained by interviews, observations, and tests. (This material is given in full in Appendix A and the statistical evaluation in Appendix B). The data appear to indicate that the listener does more than the speaker to set in motion the interaction essential to the creation of the stuttering problem. Moreover the factors which affect the listener's sensitivity to the nonfluencies of the speaker, once they have come to be regarded as stuttering, affect also the sensitivity of the speaker to them. The conclusions reached as a result of

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this intensive and detailed research program do not appear to differ essentially from the philosophy concerning the etiology of stuttering which Johnson has presented in other publications; however, because of the scope and the minute attention to details, as well as the implications for therapy in other areas of behavior, it is a significant contribution to the body of controlled research in the field of stuttering. —M. O. Shere.

759. KAPLAN, LOUIS. *Mental Health and Human Relations in Education.* New York: Harper, 1959. 476 p. \$5.00. The basic contention of this book is that schools have a function beyond that of the inculcation of knowledge and skills. The additional function of schools is to educate for mental health. A synthesis of current knowledge concerning mental health and human relations is herein attempted. Further, the book is directed toward enlightenment of teachers, school administrators, and parents in this regard. This book is designed specifically to be used as a text in mental hygiene courses. It is divided into four relatively independent sections: Part I is a description of the whole problem of mental disorder in the United States and the impact of mental disorder on the classroom. Some school-related methods of handling the problem of maladjustment are analyzed. Part II, on the other hand, deals with environmental influences outside the school which lead to maladjustment. This part emphasizes the impact of the culture on the individual and the need of school personnel to recognize these factors in evaluating school behavior. Part III describes symptoms of behavior deviation in children and attempts to provide teachers with necessary insights into psychological forces in child development. Part IV describes educational procedures based on knowledge of both normal development and deviant behavior. Each chapter concludes with a list of problems and projects for the student as well as a long list of selected references. An appendix lists pertinent visual aids by chapters. —E. R. Dubin.

760. KARPMAN, BENJAMIN. (Ed.) *Symposia on Child and Juvenile Delinquency.* Washington, D.C.: Psychodynamics Monogr. Series, 1959. 364 p. \$10.00. The American Orthopsychiatric Association held several symposia on juvenile delinquency between 1949 and 1953. Dr. Benjamin Karpman chaired these meetings and now serves as editor of this volume which contains a complete report of the symposia along with Dr. Karpman's summaries and conclusions. The list of contributors includes Drs. Frederick H. Allen, V. V. Anderson, Stella Chess, Leo Kanner, David M. Levy, Hyman S. Lippman, Reginald S. Lourie, Lawson G. Lowrey, Louis A. Lurie, Harris B. Peck, Ralph D. Rabinovitch, J. Franklin Robinson, Melitta Schmideberg, Lester W. Sontag, and Rene A. Spitz. The five round table presentations are presented along with discussions of each. The first symposium considered the psychopathic delinquent child. Seven papers are presented and discussed. Among those presented is a paper by Spitz entitled "Possible Infantile Precursors of Psychopathy," a paper by Allen entitled, "Psychopathic Behavior—Fact or Projection," and one by Anderson, "The Psychopathic Personality in Childhood." The second symposium also concerned itself with psychopathic behavior. Levy considers "The Deprived and Indulged Forms of Psychopathic Personality," Lourie, the "Pediatric—Psychiatric Viewpoint," and Lowrey, "The Development of Psychopathic Reactions." The third symposium deals with a differential study of psychopathic behavior in infants and children. Four papers are presented and discussed by the authors. Sontag discusses the differential etiological factors in psychopathic behavior in children; Rabinovitch reports on the "Observations on the Differential Study of Severely Disturbed Children"; Lippman considers the "Difficulties in Establishing the Diagnosis of Psychopathic Personality in Children"; and Lourie discusses "The Reversibility of Psychopathic-like Patterns in Early Childhood." The fourth symposium focused on the psychodynamics of child delinquency. Chess considers "The Social Factors in Delinquency" and Sontag discusses the "Problems of Dependency and Masculinity as Factors in Delinquency." Lurie presents a paper on "The Role of Endocrine Factors in Delinquency," while Schmideberg discusses the "Psychoanalysis of Delinquents." The fifth and last symposium presented concerned itself with the basic emotional factors in delinquency. Kanner presents a paper on the "Types of Delinquents," Robinson, a paper on "Problems of Adjudicated Delinquents," Sontag, a

paper dealing with "Defenses in Delinquent Behavior," Peck considers "Theoretical Concepts of Delinquency," and Schmideberg, "The Psychotherapeutic Treatment of Offenders." Many viewpoints are represented in the prepared papers as well as in the discussions that follow. As one can note from the titles of the papers, identification and evaluation of psychopathic behavior along with its dynamics and treatment are all considered. Dr. Karpman summarizes the substance of each symposium and attempts to integrate the thinking of the participants. It would seem that this volume would be of particular interest to all those interested in and working with the youthful offender. It raises many questions which can prove fruitful to the researcher as well as to the clinical practitioner. —A. M. Kaplan.

761. KIELL, NORMAN. *The Adolescent Through Fiction*. New York: International Universities Press, 1959. 345 p. \$5.00. Kiell's book deals with psychological knowledge and dynamic principles of adolescent development by supporting and illustrating developmental trends and changes with excerpts from contemporary fiction. These selections, even though taken from literature, have experiential life quality and give the reader the opportunity to live vicariously important events in the life of the adolescent. Thus, this book on adolescence by using realistic situations involving individual cases constitutes a refreshing change from the numerous textbooks which discuss development in more abstract, generalized, or statistical terms. For any course on adolescence that is primarily concerned with the attainment of insight into the experiential world of the adolescent, or with clinical understanding of normal behavior, this book would be an excellent supplement if not used as the text. The organizational structure of the book does not depart far from that of more traditional textbooks; the table of contents includes the more common headings found in textbooks: physical and social development, meaning of sex, family relations, cultural conflict, learning, choosing a career, and becoming an adult. The numerous literary excerpts which are interspersed throughout the general discussion of developmental principles and theories are taken from many sources and include various age levels as well as different socioeconomic classes. Thus, the reader can rely on an imaginary level such incidents as the first menstruation, the boy in conflict with his father about his vocational choice, the awakening of sexual drives, the difficulties in social adjustment, conflict with cultural norms, the first kiss, and many other experiences which lose some of their personal and clinical significance if they are expressed in terms of generalizations or as empirical facts. The author agrees with Freud that literature revealed psychological insight into the dynamics of behavior long before psychology became a science. He further believes that fiction can be a fruitful field for exploration in the study of adolescent personality, and he quotes Freud in saying that the storytellers know many things that our academic wisdom does not even dream of. The book is based on the theory of development that describes the period of adolescence as characterized by a physiological and psychological disequilibrium as indicated by the second chapter "On developing equilibrium." That the author attempts to strike a medium between psychology of adolescence as a science and the fiction literature on adolescence is explicitly expressed in his introduction and demonstrated by an elaborate and comprehensive bibliography covering three broad areas, *The Novel of Adolescence* (480 items), *Psychology and Literature* (416 items) and *Textbooks on Adolescence* (202 items). —R. E. Muuss.

762. KIRK, SAMUEL A. *Early Education of the Mentally Retarded*. Urbana, Ill.: Univ. of Illinois Press, 1958, vi+216 p. \$6.00. This book is a report of a longitudinal experiment concerned with the effects of preschool education on the mental, social, and personality development of 81 mentally retarded children between the ages of three and six. The historical and research background, which the author traces briefly, is the problem of training and environment versus maturation, an area to which the book adds a substantial contribution. A group of 28 community children and a group of 15 institutional children, each of whom attended preschool before entering the primary grades or special classes, are compared with each other, as well as with 26 community and 12 institutional "contrast" (control) cases who did not undergo preschool experience. The results for all children who attended preschool

are reported by means of individual case studies, whereas comparisons among all four groups are presented statistically. The case studies, which are quite thorough, include family background and early developmental history, medical and psychological status on admission to preschool, preschool progress, follow-up results, a table of all psychometric ratings, and general comments, and collectively occupy about three-fourths of the book. A chapter each is devoted to case studies of children with organic disabilities, children in foster homes, children with twin and sibling controls living in the same home, children in an institution, and miscellaneous cases. Putting together the many findings, the author concludes that "... although the upper limits of development ... are genetically or organically determined, the functional level or rate of development may be accelerated or depressed within the limits set by the organism. Somatopsychological factors and the cultural milieu (including schooling) are capable of influencing the functional level within these limits." The statement of the problem and experimental design, description of subjects, case studies, statistical results, and conclusions are all presented and organized in a clear, nontechnical, and highly readable fashion. The study is important for students and professionals in the areas of child development and mental retardation, but also to teachers and educators, institutional personnel, parents of retardates, and persons legally and administratively responsible for child welfare. —J. W. Fleming.

763. LAMM, STANLEY S. *Pediatric Neurology*. New York: Landsberger Medical Books, 1959. 495 p. \$12.90. This concisely written book surveys with an authoritative perspective the wide field of neurological problems in pediatrics. In the 21 chapters that comprise this book, most of the rare as well as the common diseases are discussed. For each disorder described, a standard approach is generally used which includes, in order: definition, clinical picture, laboratory, pathology, etiology, diagnosis, treatment, and prognosis. The illustrations, unfortunately, are not sufficiently sharp to bring out the significant details. One of the strongest features of the book is the inclusion at the end of the discussion for most of the conditions a surprising amount of well-selected current bibliography that more than compensates for the necessary omission of details in the synoptic presentation. —W. W. Sutow.

764. MACY, ICIE G., & KELLEY, HARRIET J. *Chemical Anthropology*. Chicago: Univer. of Chicago Press, 1957. 167 p. \$3.75. Those who have perused the three volumes of data (Macy, Icie, "Nutrition and Chemical Growth in Childhood," Springfield: Thomas, 1942, 1946, 1951) on which the present monograph is based will be grateful to Macy and Kelley for adding this much-needed interpretative summary. Age trends for various physical, chemical, and physiological variables are presented, but the discussion emphasizes the interaction of these variables in growth and development. Body composition is the unifying concept around which the several categories of data are organized. The methodology of the study is reviewed, although nowhere is the exact number of subjects given nor is the extent to which the data are longitudinal specified. Subjects were selected from among children living at the Methodist Children's Village in Detroit on the basis of their normality with respect to many developmental criteria. In presenting the age trends, three groups—4 to 6 years, 7 to 9 years, and 10 to 12 years—are used. The data presented are primarily those for boys, the authors stating that sex differences were negligible. Included in the summaries of age trends are: physical characteristics—anthropometric measures, indices of body build, assessments of skeletal size and maturation; metabolism of nutrients—gastrointestinal activity, absorption and retention of nutrients, fecal and urinary composition, energy exchange; blood analyses—hematology and chemistry; and body composition. The value of the observations is enhanced (1) by reporting the metabolic averages in terms of several standards of reference, e.g., weight, surface area, and (2) by recording absorptions and retentions in milliequivalents as well as weights. Body composition was estimated from the anthropometric measures, since the data were collected before most of the modern techniques for measurement were available. Some of the equations used for making the estimates are from the literature; others were derived by the authors. In each case, the procedure used and the assumptions made are stated. The major assumption involved in most of the calcu-

lations, and the assumption which is most questionable, is that the chemical composition of fat-free tissue reaches characteristic adult proportions during early childhood. One can hardly fail to be awed by the scrupulous care with which the basic data were obtained. The integration of the results achieves a good measure of the ideal toward which interdisciplinary studies strive. Even if some of the conclusions with respect to body composition in children are altered by succeeding studies, this work is a unique contribution, not only to our knowledge of nutrition in childhood, but also to our understanding of the dynamics of physical and physiological development. —D. H. Eichorn.

765. MAGNIFICO, L. X. Education for the Exceptional Child. New York: Longmans, Green, 1958. 380 p. \$4.75. The author surveys problems encountered in educating children who are an exception from the norm. Rather than present techniques and applications, the author generally deals with issues, dilemmas, definitions, alternative solutions, needs, goals, and decisions, which educators and ancillary professionals must consider. Children who are physically handicapped, especially the blind, deaf, and speech defective, mentally retarded and gifted, and emotionally mal-adjusted ("socially handicapped," including delinquents) are given attention. Each of these areas is treated with respect to the history of educative efforts, the kinds of problems and characteristics such children typically present, the various solutions that have been proposed to answer their special needs (e.g., enrichment vs. acceleration vs. segregation for the gifted), the current scope of the problem, and common practices, curricula, and types of special training. In most instances, both sides of moral, administrative, and educative issues are discussed in order to apprise the reader of pros and cons. A special chapter entitled "The need for educational specialists" discusses the necessity of special training for teachers of exceptional children, difficulties in recruiting qualified personnel, and requirements for teachers in each of the aforementioned areas. A concluding chapter, which reviews many of the basic arguments presented throughout the book, appraises the responsibility of the school administrator and proselytizes his active support in establishing and nourishing special classes and programs. Throughout, the author presents his material in the context of modern society and traces the implications of both success and failure in providing educational facilities for exceptional children. There are numerous subchapter headings which serve to organize the material and to provide easy reference to desired information. Although it was the author's intention, there is considerable repetition of points and material, much of it unnecessary and not always in new contexts. There is also a too heavy dependence on quotations from other sources, usually to emphasize a point that has already been made. The book should be most useful to persons seeking an overview of the scope of the problem of exceptionality and an indication of the basic issues involved and to persons just entering the field of special education. —J. W. Fleming.

766. MARTIN, WILLIAM E., & STENDLER, CELIA B. Child Behavior and Development. (Rev. Ed.) New York: Harcourt, Brace, 1959. 618 p. \$6.00. This book is a revised and enlarged version of the 1953 edition of "Child Development" by Martin and Stendler. Although the new text is 100 pages longer than its prototype, this raw statistic hardly reflects the fact that the authors have managed successfully to retain the unique cross-cultural flavor of the original while adding exciting, freshly-mined material. The result is a substantially improved text book. The authors provide a balanced interpretation of the theoretical and experimental data of child development without the slavish and noncommittal reporting which often reduces a text to no more than a catalogue of unrelated facts. In addition to the expansion and updating of the book's bibliography, two major changes in organization have been made. First, a number of recent and provocative researches are assembled and discussed in a new chapter on the Effects of Early Experiences. The puzzle of the impact of early learnings on later adjustment is explored through an evaluation of the findings of Spitz, Ribble, Goldfarb, and Rheingold. These studies of the effects on infants of early social conditions are contrasted with the suggestive work of Lorenz, Tinbergen, and others regarding the phenomenon of imprinting in young animals. The possibility

that infancy may contain a number of psychological periods that are critical ones for the process of socialization is an old hypothesis made new by recent evidence and one that deserves the thoughtful treatment the authors have accorded it. A second major addition to the book is a 143 page section on The Course of Normal Development. This section contains new chapters on Physical and Motor Development, Cognitive Development, and Motivational Development. The longest of the three chapters is that devoted to a detailed consideration of the characteristics of physical and motor growth in children. In a sense, this new chapter is included as a means of emphasizing the fact that socialization always occurs in a context of continuous growth. The chapter underscores the need to arrive at a workable scientific relationship between physique, growth, and personality and behavior. Speech and language development, concept formation, thinking, and intelligence make up the principle topics of the chapter on Cognitive Development. The book's final chapter, Motivational Development, explores trends in emotional development, in social development, and examines the place of learned drives in child behavior. These new chapters are a valuable and substantial addition to the usefulness of the text and with them the authors have achieved a meaningful revision of the original book. —E. B. McNeil.

767. MARTMER, EDGAR E. (Ed.) *The Child with a Handicap*. Springfield, Ill.: Charles C. Thomas, 1959. 424 p. \$11.00. With mastery over the infectious diseases in recent years has rightfully come an increasing amount of activity in medicine, public health, and allied fields on behalf of the aged, the chronically ill, and—the source of inspiration for this book—the handicapped child. The present volume consists of a notable collection of papers by a group of persons who leave no doubt about their competence in their respective fields; their efforts add up to a most useful manual for the student—neophyte, physician, nurse, social worker, therapist—and for the professional, each of whom needs to acquire a broad view of the problems of the handicapped child that will underlie and temper the specialism of his own approach. The book is divided into roughly three portions, the first dealing with the role of each member of the "team," the second with various more or less specific disorders, such as cerebral palsy, congenital heart defect, and diabetes, and the third presenting guides for parents, for community programs, and for play, reading, and health education materials. All in all, there are 28 chapters. We would have wished to see—and this is the one major criticism of the book—a chapter tying together the methodologies of the various disciplines into one coordinated whole to show how the team approach might actually function. (The book has a subtitle, "A Team Approach to His Care and Guidance.") A lesser fault, one that is found in so many edited works or collections, is the unevenness of presentation. One writer will list a set of rules, another will wax philosophical. One writer is terse and succinct, another given to extended verbiage. And not all the writers had the same level of audience in mind; indeed, the detail in one or two chapters will be quite harrowing for the layman. Lastly, expositions of this kind suffer from a certain amount of repetitiousness; all the authors are agreed that emphasis should be on the child and not on the handicap, that the child should be encouraged to do as much for himself as possible, that diagnosis should come early, that the child's problem cannot be separated from that of his parents and his siblings, etc. But perhaps these truths cannot be stated too often. —I. Altman.

768. MASLAND, RICHARD L., SARASON, SEYMOUR B., & GLADWIN, THOMAS. *Mental Subnormality*. New York: Basic Books, 1959. 442 p. \$6.75. During the student days of most of us, the field of mental retardation was perceived as a disconnected and boring account of ancient researches about which there was little to comprehend and much to memorize. An uncritical acceptance of the assumption that mental deficiency was the inevitable outcome of an anatomical or chemical abnormality of the nervous system acted to define the problem as primarily a medical one and to direct child care workers to greener pastures. In the last few years we have witnessed a dramatic transformation and revitalization of the professional reaction to the challenge of mental subnormality. In great part, this new look at intellectual retardation has come about as a consequence of a generation of researchers

who, through books such as this one, have been busily engaged in dispelling the many myths which have hampered progress for so long. This book by Masland, Sarason, and Gladwin is really two reports bound together as a single volume. Part I is by a physician (Masland) and is a critical review of the literature relevant to the organic, biological, and hereditary aspects of mental retardation. Genetic factors, diseases of the nervous system, vascular diseases, and prenatal and postnatal causes of pathology all are considered. The theoretical position which dominates this section is perhaps best expressed in Masland's own words. He states that, "I consider it likely, however, that the factor of brain injury can operate throughout the whole range of intelligence, and, in fact, that minor degrees of injury are far more common than are the severe and grossly evident ones." He makes reference to 328 books and articles on the subject and, while it is a valuable review of an important facet of the field, this part will prove to be most useful to members of the medical profession. The most striking conclusion to issue from this review is that there exists a profusion of disparate, unmatched, unrelated studies of physiological processes that, taken together, form something less than a coherent pattern. In Part II, entitled *Psychological and Cultural Problems in Mental Subnormality*, Sarason and Gladwin have done an intensive reappraisal of the theory and research evidence on subnormality. This section is nearly twice as long as that on biological factors and, from the point of view of the social scientist, it will be of greater value. It is an insightful and intellectually stimulating analysis of the important research landmarks. To the reader who is on the fringe of professional work with subnormality, this critical probing of the state of our knowledge cannot help but provoke a fundamental reorientation to the sources, causes, and meaning of low intelligence. To the researcher immersed in the field, this volume ought to be required reading as a precaution against the compounding of classic errors. In an impressive fashion the authors have demonstrated that the study of mental subnormality can make important theoretical and substantive contributions to our understanding of the nature and development of normal intellectual functioning. In the process of reuniting normal and subnormal events, they have spelled out a host of new and crucial hypotheses which ought to be a part of the theoretical orientation of every researcher. After discussing the criteria by which one judges the significance of test results as a measure of intelligence, the authors examine some recent contributions to our conception of intelligence and comment on the implications of the widespread belief in the inheritance of mental subnormality. The cultural determinants of both normal and subnormal intellectual performance and the broader implications of test scores and nontest problem solving are considered in some detail. Two chapters are then devoted to an examination of the misconceptions (which abound in the clinical literature) concerning the severely defective child. An additional chapter takes the higher grades of mental deficiency as its focus. The social problems of institutionalization for mental defect, as opposed to alternate ways of dealing with mental subnormality, is explored in a highly thoughtful manner. My over-all impression of this section in particular and the book as a whole is that the publisher might well offer a money-back guarantee if the reader fails to acquire new perspectives as a result of reading it. Both examinations of the literature were published previously; binding them together in this volume is a fitting indicator of the growing interest in the paradox of retardation. —E. B. McNeil.

- 769. MILLER, DANIEL R., & SWANSON, GUY E. *The Changing American Parent*.** New York: Wiley, 1958. 316 p. \$6.50 This book is a study of the relationship between the occupational setting of fathers and child training in the Detroit area. Its importance lies in the intriguing hypothesis that the type of occupational setting of the family should affect its child rearing goals, hence its training practices. Occupational setting, or "integration" as the authors have labelled it, is defined as "bureaucratic" or "entrepreneurial." The book starts with a chapter on the history of child rearing practices, proceeds to an interesting chapter on recent class changes in the U.S. and some hunches about changes in child training induced by new kinds of occupational demands. Chapter 3 deals with the nature of the sample, the interviewing procedures, and method in general. The remaining chapters present, in well organized fashion, the results. A provocative set of speculations is offered about

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the effect of increasing bureaucratization of work. The authors present a fine example of high quality interaction between sociology and psychology. They are careful to separate hypothesis from conclusion. While they seem to be fully aware of the personal conflicts engendered by entrepreneurial integration, they tend to understate those engendered by bureaucratic integration, thus giving a picture of personal security in families of the latter type which will probably give way under the impact of more data. This book is required reading for anyone interested in maternal report on child rearing. It is, more importantly, a rich source of hypotheses about the pervasive occupational way the father has impact on the family. Miller and Swanson have restored the father to the family (where he has been through the years) although he had been only an occasional guest to psychological research on the family. —Z. Luria.

770. MOORREES, COENRAAD F. A. *The Dentition of the Growing Child.* Cambridge: Harvard Univer. Press, 1959. vi+245. \$5.50. This is a very thorough study, based solely on measurements of dental casts in two longitudinal series. The volume is noteworthy more for what it does not say than for what it does say; i.e., it is very conservatively presented and definitive conclusions are few. But I feel that Moorrees' caution is well-founded, for the dental cast is really a quite restricted, rather isolated, area in the total dento-facial complex. After an excellent 40-page review of the literature Moorrees states his data: 59 boys, 73 girls of Boston (data from H. C. Stuart, M.D.) seen annually 2-3 to 16-18 years (12-16 age period missed on account of the war); 25 boys, 27 girls of Wilmington, Delaware (data from R. H. Stucklen, D.D.S.), seen annually 5-6 to 16-18 years. Chronological ages are used throughout. The total measurements on the casts are, for each child, presented graphically on a composite chart in which the horizontal axis is age, the vertical axes the dimensions; the vertical axis for each dimension is divided into two halves, for maxillary and mandibular arches, and each half is divided into three equal parts. Only children with normal occlusion were finally tabulated. The length of the dental arch decreases with age, except while the permanent incisors are erupting. Arch breadths increase irregularly with age. Mean changes in arch length and breadth are associated with eruption of permanent I1-2, C, and Pm1-2. Arch circumference increases in the maxilla and decreases in the mandible between 5-18 years. In the deciduous teeth the average amount of interdental space does not increase after 3 years. It decreases as I1-2 appear, but increases with Pm1-2. In both sexes there is lack of space for lower I1-2, and in boys for upper and lower C. The average amount of overbite in both deciduous and permanent dentitions is about 35-40% of the clinical crown height of the lower I1. Moorrees feels that none of the measurements taken permit one "at a young age" to predict dentition dimensions at 18 years. In a discussion of dental development of the individual child it is concluded that "the analysis of the longitudinal data has emphasized the wide ranges of individual variation." However, Moorrees feels that the data do have some value in orthodontic prognosis. He advocates two routine sets of dental casts, one at $\pm 5-7$ years, one at $\pm 7-9$ years. To this should be added cephalometric radiographs, and intra-oral X-ray films. Children should be carefully followed during the period of the changing dentition: general as well as facial growth and development, maturation, health, adjustment, environment, and familial resemblances, "all of which are necessary for diagnosis and prognosis." In an appendix the original data are given for arch length, arch breadth, and available space. There is a good bibliography and an index. —W. M. Krogman.

771. SEIDMAN, JEROME M. (Ed.) *The Child: A Book of Readings.* New York: Rinehart, 1958. 674 p. \$6.75. The 65 readings selected for this volume are organized under five main divisions and 19 subdivisions which follow a rather typical course pattern. Part One, Infancy and Childhood: Two Periods of Growth and Development, is concerned with principles of development, the beginnings of behavior and physical and motor development. Part Two, Socialization: Multiple Group Membership, presents readings on socialization in the family, school and community and in peer groups. Parts Three and Four, Personal-Social Development and Behavior, make up nearly half of the book and deal with mental abilities, language, understanding, play and attitudes, values, motivation, personality and the concept of self. Part Five,

Understanding and Helping the Child, covers individual and group approaches and the transition from childhood to adolescence. About one-third of the selections were published after 1955, between 1950 and 1954, and between 1940 and 1949. Three were published in the 1930's. Most first appeared in psychological journals, but sociological, psychiatric, and medical journals are represented. —M. C. Templin.

772. STRANG, RUTH. *An Introduction to Child Study*. (4th Ed.) New York: Macmillan, 1959. 543 p. \$6.75. Strang has written a book which is admittedly directed toward a wide variety of people who can contribute more to children through an understanding of human growth and development. The book is successful in that it permits people without a background in child development to step into the area and develop understandings easily. A good point is made about the constructive influence on children of therapeutic personalities. A chapter could well have been devoted to the development of this thought. The material of child development is shown through a developmental approach by ages; the same aspects of development are treated repeatedly at the various age levels. It is the reviewer's belief that in the teaching of child development more progress and growth in understanding can be made by treating the various phases chapter by chapter instead of sequentially through the ages and stages. The book has definite advantages for the parent looking for the developmental tasks of a specific age level. However, for the student, much continuity is lost by presenting the areas in piecemeal fashion. Study helps are present in the form of questions and suggestions for child study. The instructor will find the reference to books, articles, and films of real value. The bibliographies at the end of each chapter supplement the material efficiently. The text is interspersed with interesting quotes in relation to the development of the child. However, one who is looking for a distinct approach, such as that presented by Olson, Millard, Gesell, Havighurst, Ilg and Ames, or Martin and Stendler, will not appreciate the eclectic approach. —D. Dinkmeyer.

773. WATSON, ROBERT I. *Psychology of the Child*. New York: Wiley, 1959. 671 p. \$6.95. This text combines breadth and thoroughness in presenting the research literature on child development. Serious students of psychology at all levels will profit from reading parts of Watson's book. In presenting each topic, the author describes the pertinent studies, summarizes the findings, and offers an interpretive conclusion. Useful distinctions and conceptual schemes are developed and skillfully interwoven with the empirical findings. The author is sensitive to the tentative nature of generalizations in areas where the facts are scattered or inadequate. The field of child psychology is covered well, particularly the areas of motivational and psychosocial development. Some readers may miss more extensive presentations of genetics, physical growth, comparative data, ecological studies and cognitive processes. Psychoanalytic and s-r reinforcement learning theories are used as explanatory models. An early chapter is devoted to an exposition of the orthodox psychoanalytic theory of development, and throughout the book this view is evaluated in the light of research findings. The author develops a "neo-Freudian" framework which he contends integrates the better substantiated features of psychoanalytic and learning theories. Actually, the theory developed bears little resemblance to Freud's, while it fits the postulates of learning theory quite closely. The book is divided into five major sections: History and Principles, Infancy, Early Childhood, Later Childhood (not including adolescence), and Psychological Disturbances in Childhood. Each of the thirteen chapters ends with a summary, a short statement about some recommended readings, and a list of references. The book contains only a few pictures, tables, and graphs, without sacrificing clarity. The author's writing is serious and often quite intricate. The sophisticated nature of many of the discussions will make this a particularly challenging text for the undergraduate. In courses that combine child and adolescent psychology, this book will have to be supplemented with a text or outside readings on adolescence. The sections on psychological and physical disturbances are valuable additions to a child psychology text, but are not extensive enough for courses that give more than just an introduction to these topics. —W. Emmerich.

Books Received

- AMES, LOUISE BATES, MÉTRAUX, RUTH W., & WALKER, RICHARD N. **Adolescent Rorschach Responses.** New York: Hoeber, 1959. 313 p. \$8.50.
- ALMY, MILLIE. **Ways of Studying Children.** New York: Teachers Coll., Columbia Univer., 1959. 239 p. \$3.50.
- BENTON, ARTHUR L. **Right-Left Discrimination and Finger Localization.** New York: Hoeber, 1959. 200 p. \$7.00.
- BLANSHARD, BRAND. (Ed.) **Education in the Age of Science.** New York: Basic Books, 1959. xviii+302 p. \$4.50.
- BUROS, OSCAR KRISEN. (Ed.) **The Fifth Mental Measurements Yearbook.** Highland Park, N.J.: Gryphon Press, 1959. xxvii+1292 p. \$22.50.
- CLARKE, ANN M., & CLARKE, A. D. B. (Eds.) **Mental Deficiency.** Glencoe, Ill.: Free Press, 1959. xvi+513 p. \$10.00.
- CLARKE, H. HARRISON. **Application of Measurement to Health and Physical Education.** (3rd Ed.) New York: Prentice-Hall, 1959. 543 p. \$6.95.
- COLE, LUELLA (in association with Irma Nelson Hall). **Psychology of Adolescence.** (5th Ed.) New York: Rinehart, 1959. 747 p. \$7.00.
- CYPREANSEN, LUCILLE, WILEY, JOHN H., & LAASE, LEROY T. **Speech Development, Improvement, and Correction.** New York: Ronald, 1959. 353 p. \$5.00.
- ESTVAN, FRANK J., & ESTVAN, ELIZABETH W. **The Child's World: His Social Perception.** New York: Putnam's, 1959. xiii+302 p. \$4.95.
- FLINT, BETTY MARGARET. **The Security of Infants.** Toronto: Univer. of Toronto Press, 1959. 134 p. \$3.50.
- FROSCH, JOHN, & ROSS, NATHANIEL. (Eds.) **The Annual Survey of Psychoanalysis. Vol. 5.** New York: International Universities Press, 1959. xvi+608 p. \$12.00.
- GARRISON, KARL C., & FORCE, DEWEY G., Jr. **The Psychology of Exceptional Children.** (3rd Ed.) New York: Ronald, 1959. 592 p. \$6.00.
- GOODLAD, JOHN I., & ANDERSON, ROBERT H. **The Nongraded Elementary School.** New York: Harcourt, Brace, 1959. vii+248 p. \$4.95.
- GRONLUND, NORMAN E. **Sociometry in the Classroom.** New York: Harper, 1959. 340 p. \$4.50.
- HYDE, VANCE. —**And Everything Nice.** New York: David McKay, 1959. 240 p. \$3.95.
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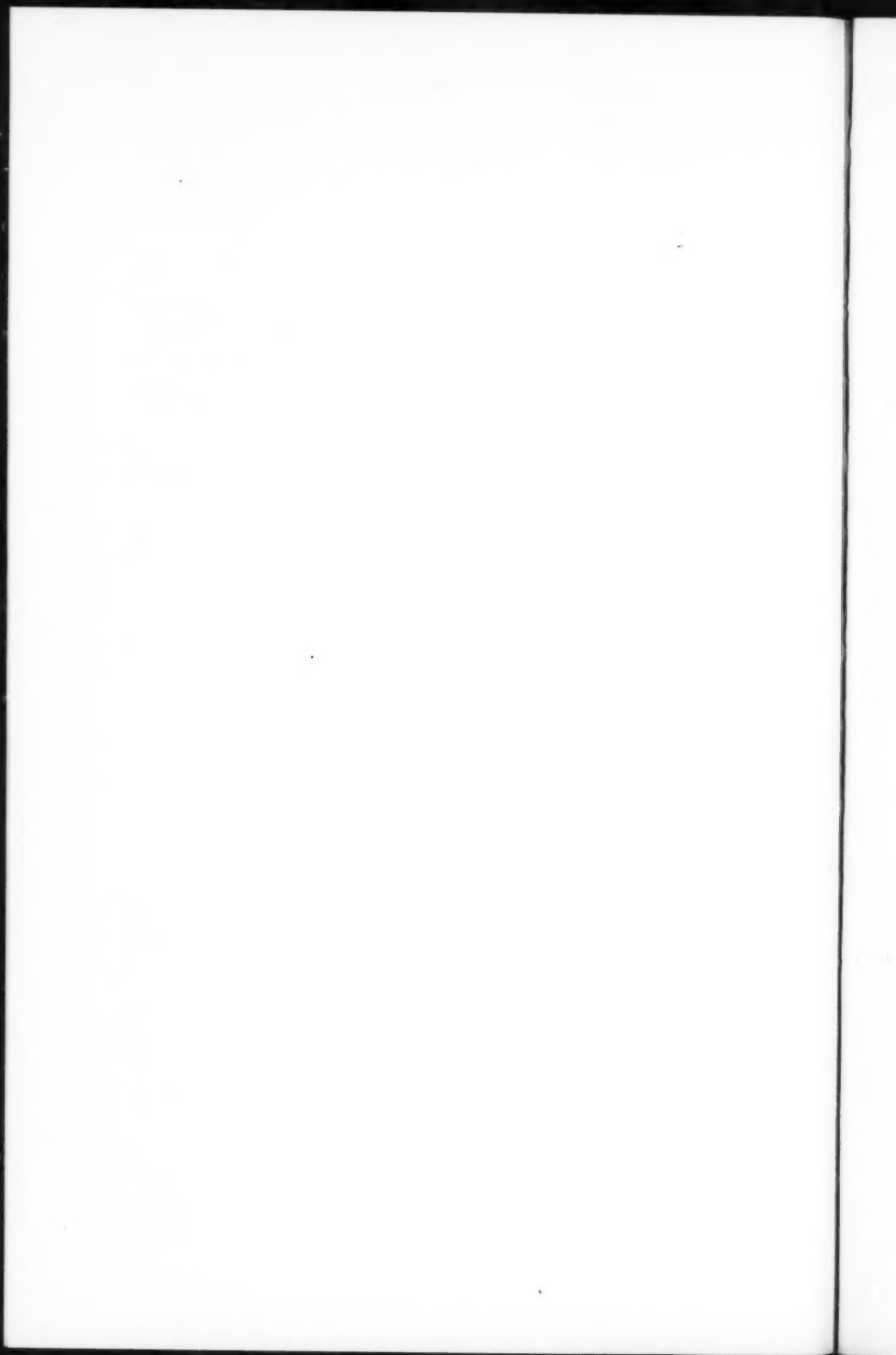
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